PARKVIEW
HEALTH

2019 Community Health Needs Assessment
Parkview LaGrange Hospital, LaGrange County

RICHARD M. FAIRBANKS
SCHOOL OF PUBLIC HEALTH
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Contributors

Indiana Partnership for Healthy Communities

The Indiana Partnership for Healthy Communities (IN-PHC) is a collaboration between **the Polis Center at IUPUI** (Polis) and the **Indiana University Richard M. Fairbanks School of Public Health** (FSPH). Formed with support from the Indiana Clinical and Translational Sciences Institute (I-CTSI), its mission is to help build the capacity of hospitals, local health departments, and community-based organizations to improve the health of Indiana communities. IN-PHC does this by translating knowledge generated by the academy and by communities into improved and sustainable processes for understanding and effecting community health.

The Polis Center at IUPUI

Focused on finding practical, effective, and cost-efficient ways for communities to enhance their capacity for meaningful change, Polis uses innovative approaches to understand communities. Polis enhances community capacity for collaborative, data-informed decision making and action using place-sensitive analysis. Team members include:

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Focused on research and service in public health and health care systems, FSPH conducts high quality program evaluation and applied research on methods for understanding and addressing community health issues. Team members include:

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Executive Summary

To assist Parkview Health in completing its 2019 community health needs assessment (CHNA), the Polis Center and the Richard M. Fairbanks School of Public Health designed and conducted both primary and secondary data collection and analysis activities for the seven counties in northeast Indiana that compose Parkview's primary service area, including: Allen, Huntington, Kosciusko, LaGrange, Noble, Wabash, and Whitley. This report is particular to **LaGrange County**.

The CHNA team assessed the health needs of the Parkview Health region as a whole, as well as the needs of the individual counties. A preliminary list of community health needs was identified using secondary data from the Healthy Communities Institute database as well as other state and national data sources. This list of community health needs was augmented with local input collected via a community phone survey and a local provider survey.

The Parkview Health service area includes a relatively large Amish population in LaGrange County. Because Amish populations are often underrepresented in online and telephone surveys, a paper survey was conducted in the Amish Community to ensure that the community health concerns of these populations were captured.

The assessment team objectively prioritized the identified community health needs using the Hanlon Basic Priority Rating Method recommended by the National Association of County and City Health Officials (*Guide-to-Prioritization-Techniques.pdf*, n.d.). This method rates health concerns based on: 1) size of the health problem, 2) seriousness of the health problem, and 3) availability of evidence-based interventions.

The top health concerns identified for LaGrange County were **aging (Alzheimer's Disease), cardiovascular disease (heart disease and stroke), diabetes (adults 20+ with diabetes),** and **obesity (adults 20+ who are obese)**.

As the next step in selecting health priorities for its community health improvement planning efforts, the CHNA team recommended that Parkview screen the identified health concerns based on feasibility of available public health interventions. Feasibility includes the suitability and community acceptability, availability of resources, cost-benefits ratio, and legality of potential interventions. Based on a consideration of these factors, Parkview Health selected substance use/mental health, obesity and maternal and child health as its top community health priorities for LaGrange County for 2020-2022.

Organization of the Report

This CHNA report was designed to support Parkview Health's community benefit programming efforts and to fulfill its IRS reporting requirements. As such, it provides a description of the following:

1. **Description of Service Area** (The hospital primary service area)
2. **The Community** (Socio-demographics of the populations residing in the primary service area and availability of social services relevant to public health)
3. **Data Sources** (Primary and secondary data sources used to conduct the CHNA)
4. **Identification of Community Health Needs** (The process for identifying community health needs and social determinants of health via primary and secondary data analysis)
5. **Ranking of Identified Community Health Needs** (The process and criteria used for scoring and ranking the identified community health needs and the results (the top ranked needs). The full set of indicator rankings is included in **Appendix B: Scoring of Community Health Needs.)**
6. **Priority Selection** (Priorities selected by Parkview Health)
7. **Data Limitations** (Data limitations and information gaps)

INTRODUCTION

The IRS requires all nonprofit hospitals to complete a Community Health Needs Assessment (CHNA) every three years. Parkview Health partnered with The Polis Center at IUPUI (Polis) and the Indiana University Richard M. Fairbanks School of Public Health (FSPH) to design and conduct a 2019 CHNA for each of its seven hospitals. This report provides an overview of the CHNA processes and methods used to identify and prioritize significant health needs of the community served by the Parkview Health region.

DESCRIPTION OF SERVICE AREA

Parkview LaGrange Hospital serves LaGrange County, Indiana, as shown in *Figure 1.*

Figure 1: Primary Service Area of Parkview Hospitals in LaGrange County
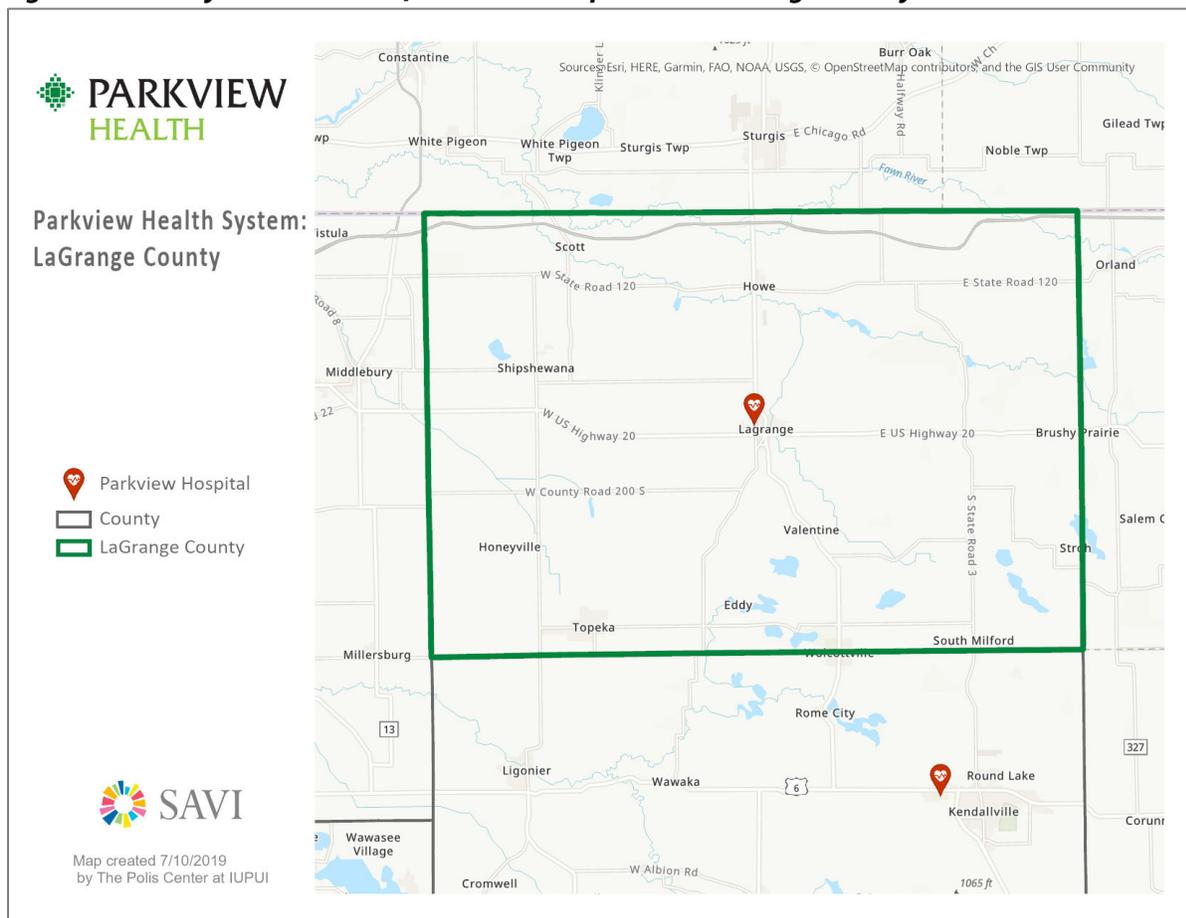
THE COMMUNITY

DEMOGRAPHICS

Population Size

The seven-county Parkview Health service area comprises about 10% of the total population in Indiana *(Table 1)*. Based on population density, only Allen County is considered urban. LaGrange County is considered rural. (Ayres, Waldorf, & McKendree, n.d.).

Table 1: Population

	Parkview Health	Indiana	US
Population	634,457	6,614,418	321,004,407

Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Allen County has the highest population in the service area (367,747) followed by Kosciusko (78,720) (*Table 2*). While Allen, Kosciusko, LaGrange, and Whitley Counties all experienced population growth between 2014 and 2017, Huntington, Noble, and Wabash each experienced some population decline.

Table 2: Population in Parkview Counties

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
2017	367,747	36,520	78,720	38,720	47,421	31,848	33,481
2014	360,990	36,959	77,790	37,759	47,497	32,492	33,307

Source: Stats Indiana

Age

The median age ranges from 31.5 years in LaGrange County to 42 years in Wabash County (*Table 3*). The median age in LaGrange County is notably lower than the other counties as well as the state and nation, while the median ages in Wabash and Whitley Counties are notably higher. In 2017, the median age in LaGrange County was 31.5 years.

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	35.7	40.3	38.0	31.5	38.5	42.0	41.0	36.8	37.5
2014	35.6	39.9	38.0	30.9	37.6	42.3	40.6	36.6	37.2

Table 3: Median Age in Years

Source: US Census Bureau (American Community Survey Five-year Averages)

LaGrange County has a different population age makeup to the Parkview Health service area and to the rest of Indiana. Almost a quarter of the LaGrange County population is between 5-17 years old, compared to 18.8% for the Parkview region and 17.5% for the state. (*Figure 2*: Population by Age Group).

Figure 2: Population by Age Group
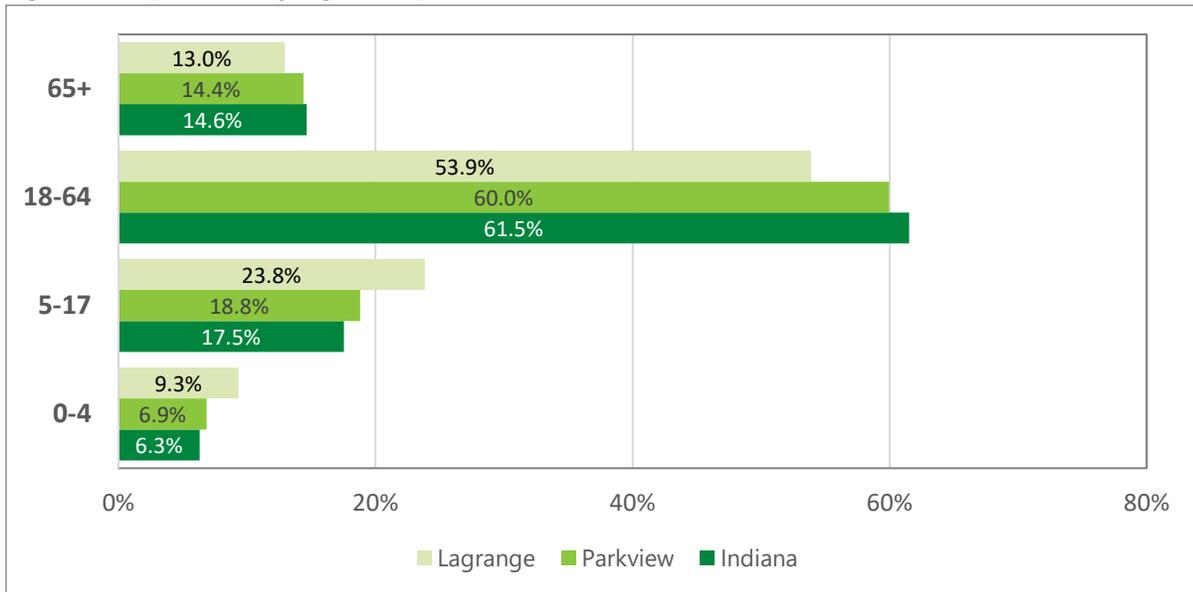
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Figure 3: Age Pyramid
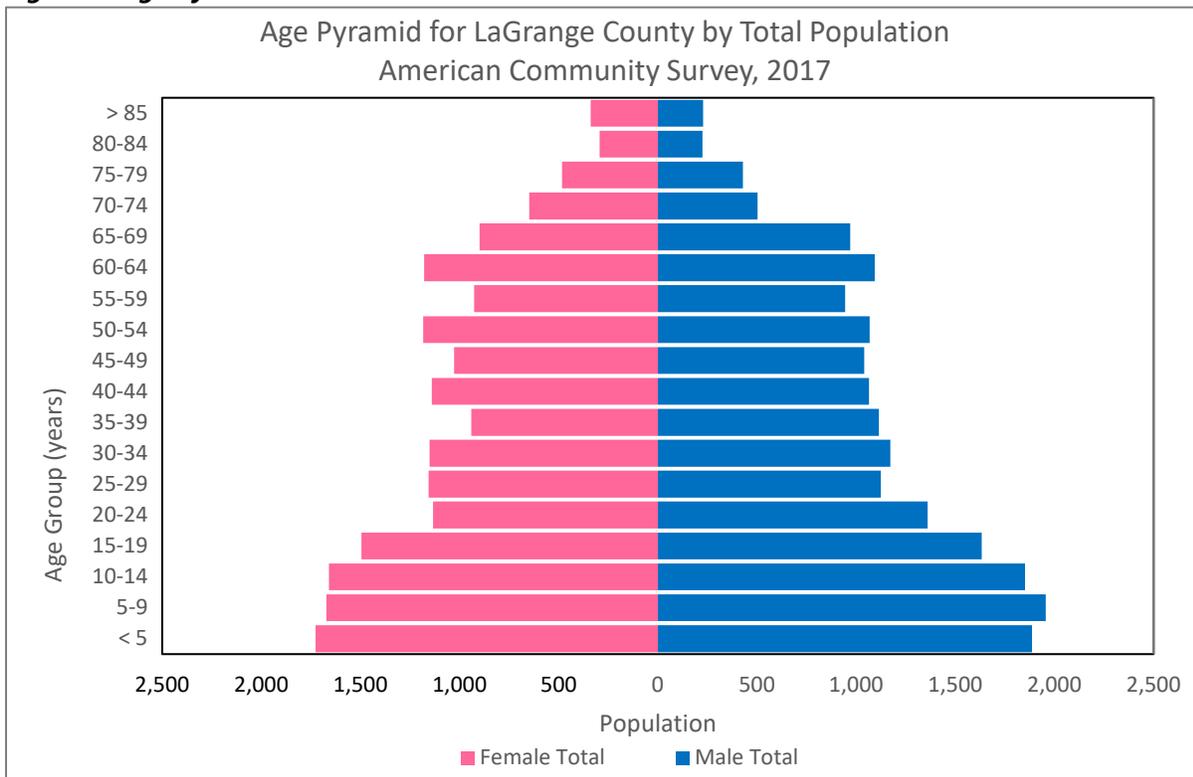
The age-sex distribution (or pyramid) of LaGrange County (*Figure 3*) is different from that of any developed country that would be expected. LaGrange County age pyramid resemble the expansive type of age pyramid. ("From Population Pyramids to Pillars – Population Reference Bureau," n.d.) *Figure 3* shows larger numbers of the population in the younger age groups. The highest number of population is seen in the < 5 years age group. These types of pyramids are usually found in populations with very large fertility rates and lower than average life expectancies.

Although, in US these types of age distribution is not common but provided the specific make up of LaGrange County population with large number of Amish population, this age distribution is expected.

Because different age groups require different levels and types of care, strategies for improving community health outcomes should incorporate the needs of each generation. The percentage of the population under 18 years hovers between 20-25% for all the counties in the Parkview Health region except for LaGrange County where almost a third (33.1%) of the total population is under 18 years (*Figure 4*). At the other end of the age spectrum are individuals 65 years and older. *Figure 4* demonstrates that the 65 and older population is only 13% in LaGrange County.

Figure 4: Child and Senior Population
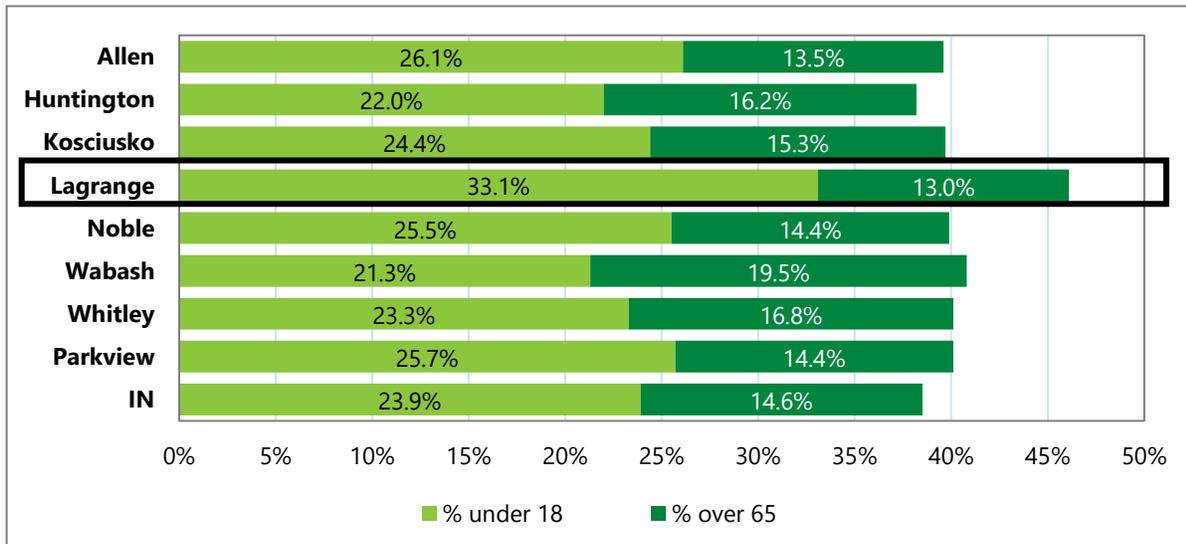
Race and Ethnicity

Many racial and ethnic groups experience disparities in health and healthcare. These groups may face unique challenges in accessing healthcare due to linguistic, social, or cultural differences. Therefore, it is important to be cognizant of the racial and ethnic makeup of the hospital service area and to design and implement culturally competent healthcare services.

As illustrated by *Table 4* and *Figure 5*, the racial composition of the entire Parkview Health region is predominantly non-Hispanic White, which is similar to the rest of Indiana. However, some racial diversity exists in some of the Parkview Health counties. Noble County has the highest Hispanic population (10.2%) in the region, followed by Kosciusko County (7.9%).

Table 4: Percent of Population by Race and Ethnicity

	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
White	2017	74.6%	95.2%	88.6%	94.4%	87.6%	94.5%	95.7%	81.8%	79.8%
	2014	75.6%	95.8%	89.2%	94.8%	88.2%	95.0%	96.0%	82.7%	80.8%
Black/ African American	2017	11.3%	0.8%	0.7%	0.1%	0.4%	0.9%	0.4%	6.8%	9.1%
	2014	11.5%	0.6%	0.7%	0.1%	0.3%	0.5%	0.3%	6.8%	9.0%
Hispanic/ Latino	2017	7.2%	2.2%	7.9%	3.9%	10.2%	2.5%	1.9%	6.5%	6.7%
	2014	6.8%	1.9%	7.7%	3.8%	9.8%	2.2%	1.8%	6.2%	6.3%
Other Race or Ethnicity	2017	6.9%	1.8%	2.8%	1.6%	1.8%	2.1%	2.0%	4.9%	4.4%
	2014	6.1%	1.7%	2.4%	1.3%	1.7%	2.3%	1.9%	4.3%	3.9%

Source: US Census Bureau (American Community Survey Five-year Averages)

LaGrange County has proportionally fewer Blacks/African Americans than the state and nation.

Figure 5: Race and Ethnicity
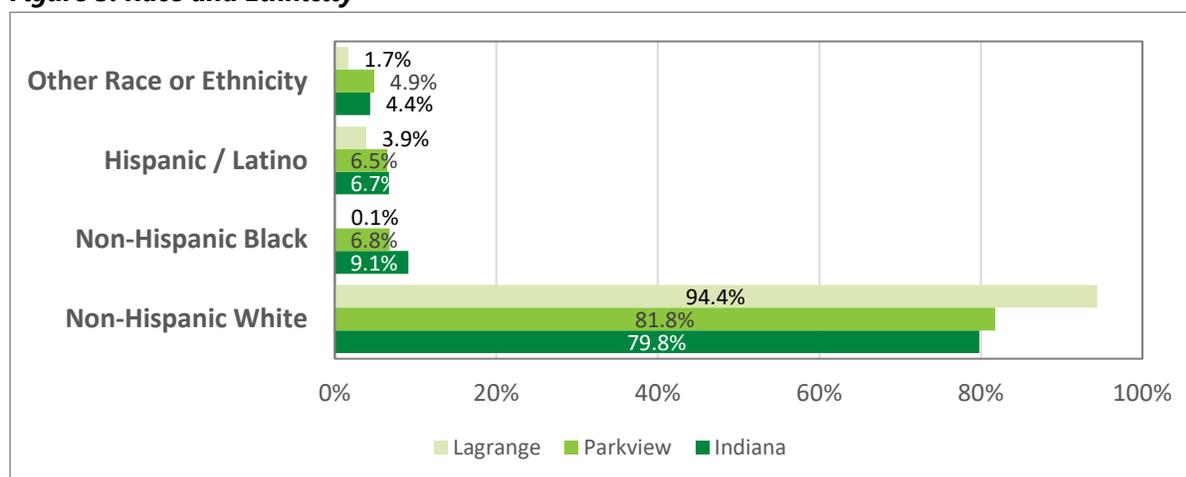
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Northeast Indiana is home to a large Amish population. According to the 2010 US Religion Census, more than 14,000 Amish lived in LaGrange County, accounting for 37.9% of its total population, making it the second largest county (by population) for the Amish in the United States. The map included as *Figure 6* shows the Amish population by county in the seven-county region in Northeast Indiana.

Figure 6: Amish Population by County in Parkview Service Area
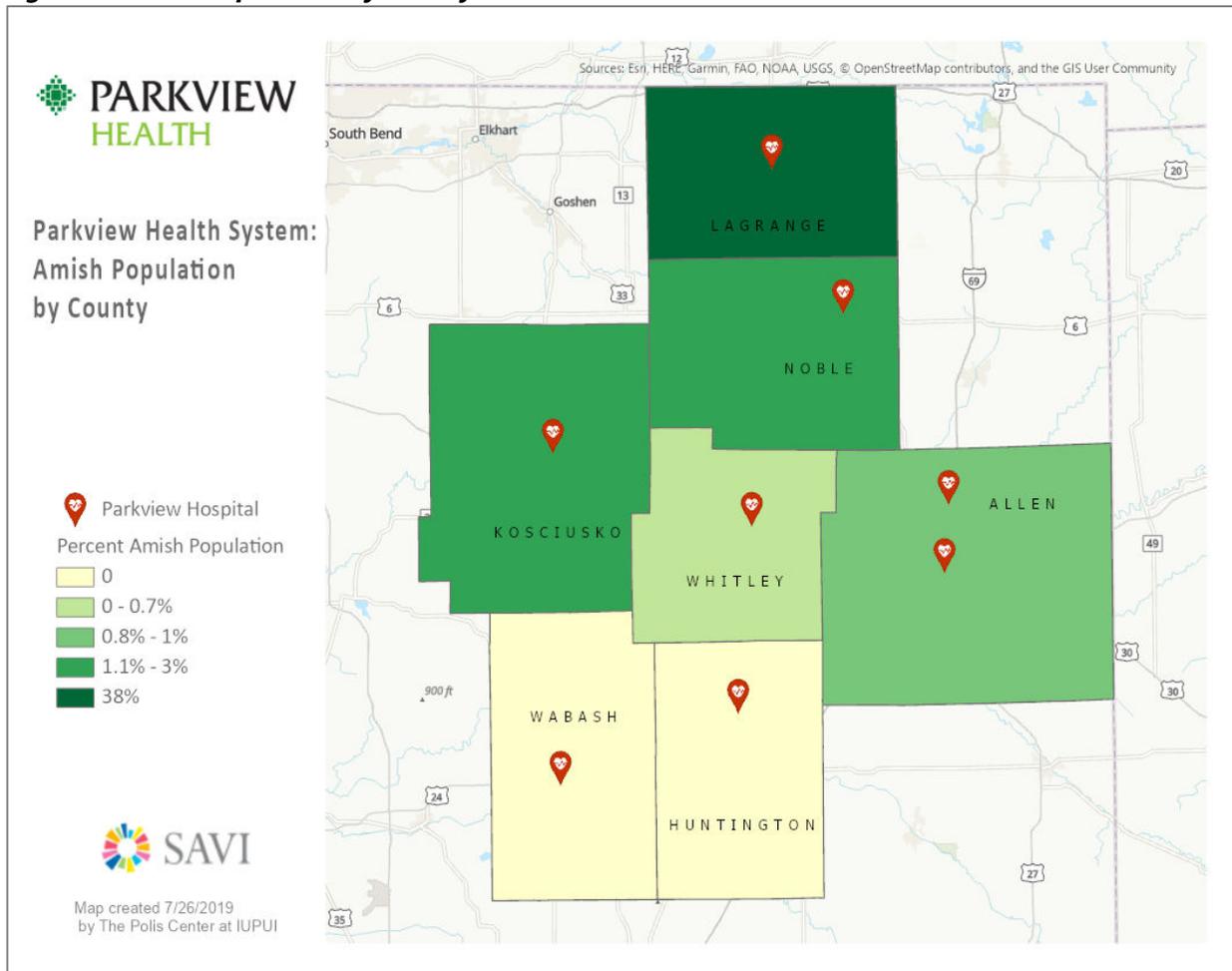
Source: Association of Religion Data Archives, 2010 US Religion Census

SOCIOECONOMIC STATUS

Socioeconomic status (SES) is a powerful determinant of health outcomes. SES refers to one's access to financial, educational, and social resources. SES underlies three major determinants of health, including environmental exposure, health behavior, and health care. In addition, chronic stress associated with lower SES may increase morbidity and mortality. When using socioeconomic factors to understand potential health risks, income, poverty, employment status and educational status are typically considered.

Median Household Income

The median household income in the region ranges from a low of $49,052 in Wabash County to a high of $58,336 in LaGrange County (*Table 5*). Since 2014, the median household income in LaGrange County increased by 18.8%, while it only increased 4.0% in Allen County.

Table 5: Median Household Income

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	$51,091	$50,063	$57,190	$58,336	$52,393	$49,052	$57,041	$52,540	$52,182
2014	$49,124	$47,356	$52,706	$49,112	$49,102	$45,657	$54,023	$49,540	$48,737

Source: US Census Bureau (American Community Survey Five-year Averages)

Racial disparities regarding median household income are evident in *Figure 7.* The median household income for Hispanic households is lower than that of the White households. These gaps in income ultimately effect lifestyle and neighborhood choices, ability to afford health insurance, and access to health care.

Figure 7: Median Household Income by Race and Ethnicity
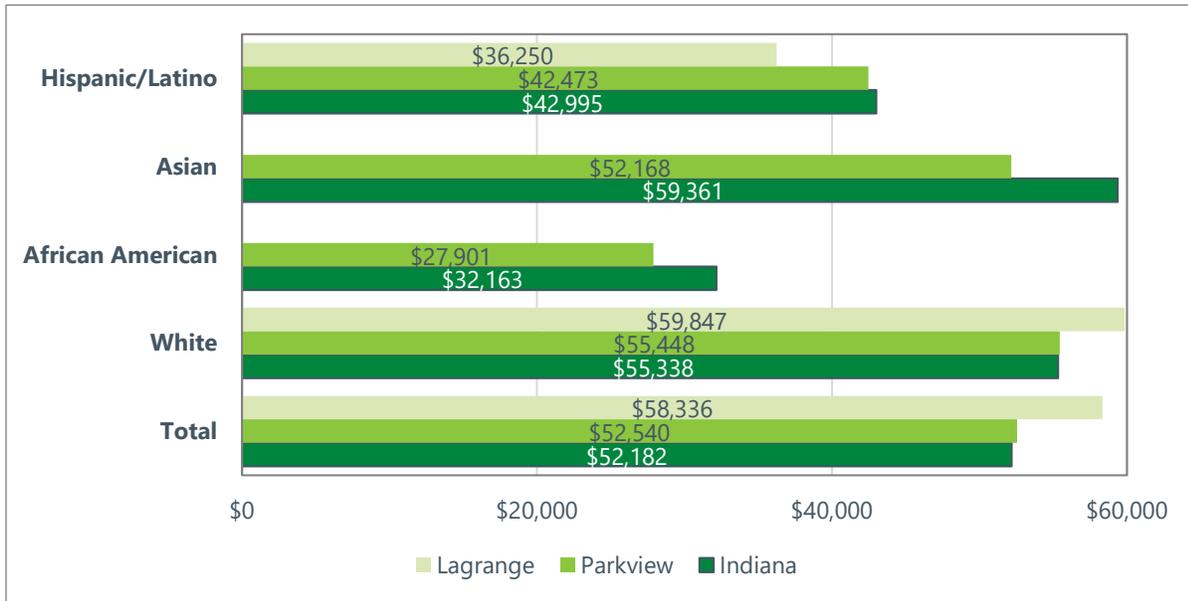
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)
Median Household income for the Black/African American population and Asian population is not available from American Community Survey for LaGrange County for 2013-2017.

Poverty

The percentage of the population living below poverty in the overall Parkview Health region (13.0%) is lower than the state percentage (14.6%). However, the percentage of the population below poverty ranges from a low of 9.1% in LaGrange County to a high of 14.7% in Allen County (*Table 6*).

Table 6: Percentage of Population below Poverty Line

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	14.7%	11.6%	11.2%	9.1%	9.3%	13.3%	9.5%	13.0%	14.6%
2014	15.5%	11.6%	12.4%	15.3%	12.8%	14.9%	8.9%	14.3%	15.5%

Source: US Census Bureau (American Community Survey Five-year Averages)

Racial disparities exist for the percentage of population living under poverty level. Racial disparities in poverty result from cumulative disadvantage over the life course, as the effects of hardship in one domain spill over into other domains. Although Hispanic households in LaGrange County have a lower median income than White households, they have a lower percentage of population (8.5%) living under the federally defined poverty level (*Figure 8*).

Figure 8: Population below the Federal Poverty Level by Race/Ethnicity
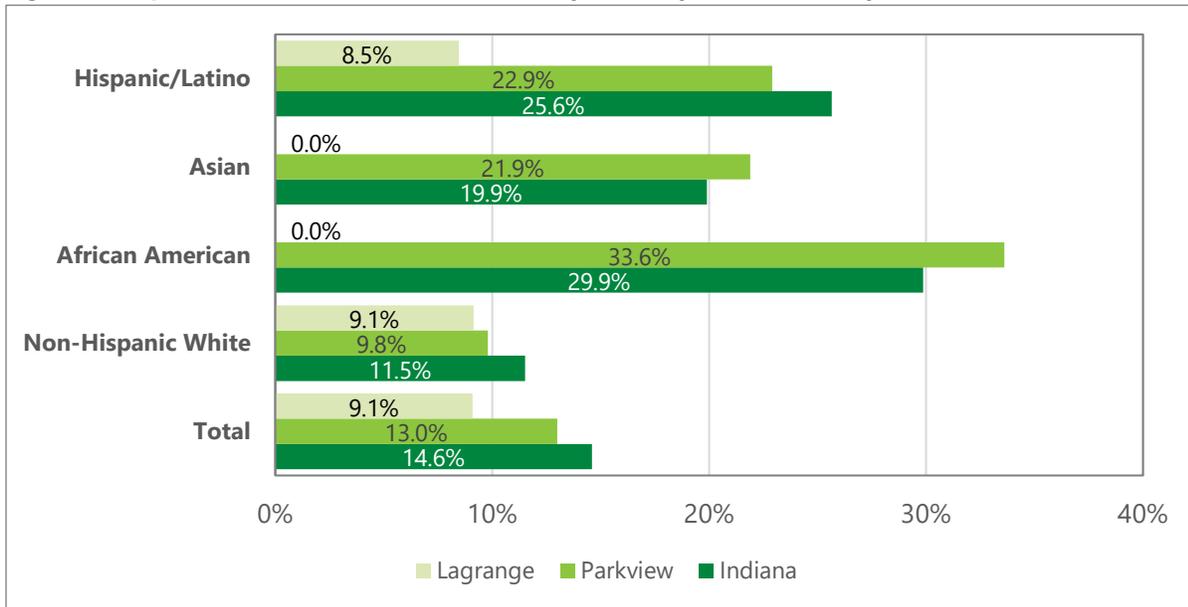
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Unemployment

Unemployment is another important indicator for assessing social and economic status of a geographic area or population. Unemployment in the Parkview Health service area is lower than the state overall. Unemployment ranges from 2.9% in LaGrange County to 6.3% in Allen County (*Table 7*).

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	6.3%	3.9%	4.6%	2.9%	5.7%	5.5%	3.6%	5.6%	6.1%
2014	9.0%	8.7%	7.7%	7.1%	10.0%	7.4%	6.4%	8.6%	8.8%

Table 7: Percentage of Population Unemployed

Source: US Census Bureau (American Community Survey Five-year Averages)

Due to the lack of racial diversity in LaGrange County, racial disparities in unemployment are not detectable. (*Figure 9*).

Figure 9: Unemployment Rate by Race/Ethnicity
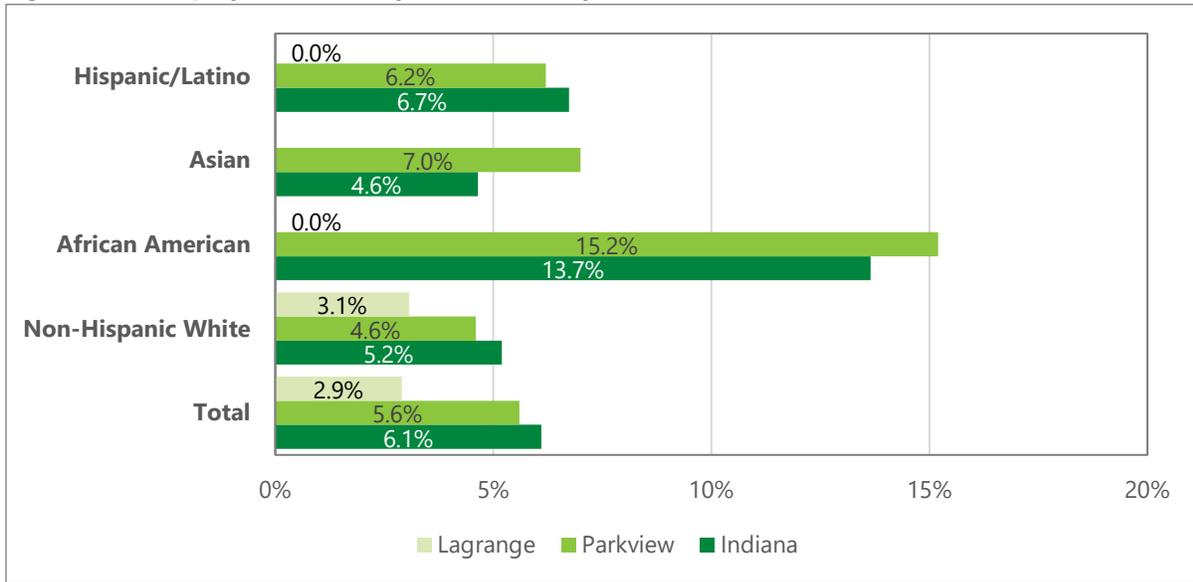
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)
Unemployment rate for Hispanic/Latino, Asian and Black/African American population not available from American Community Survey for LaGrange County for 2013-2017.

Education

Education is a powerful predictor of other social measures. Education leads to higher incomes and lower poverty and unemployment, which in turn lead to greater economic stability. Identifying populations with limited education may help to identify areas of special health service needs.

Table 8 shows the percentage of population without a high school diploma or equivalent. LaGrange County has the highest proportion of the population without a high school diploma (36.7%), which is influenced in part by the large Amish population. The Amish do not usually attain high school educations and instead pursue other economic endeavors in their communities. Some portions of Allen, Kosciusko, and Noble Counties also have a relatively higher proportions of the population without a high school diploma (*Figure 10*).

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	10.6%	9.5%	15.2%	36.7%	15.0%	11.3%	8.9%	12.7%	11.7%
2014	10.7%	11.1%	14.9%	36.9%	16.0%	12.0%	8.9%	13.0%	12.4%

Table 8: Population without High School Diploma

Source: US Census Bureau (American Community Survey Five-year Averages)

Figure 10: Percent of Households with No High School Diploma
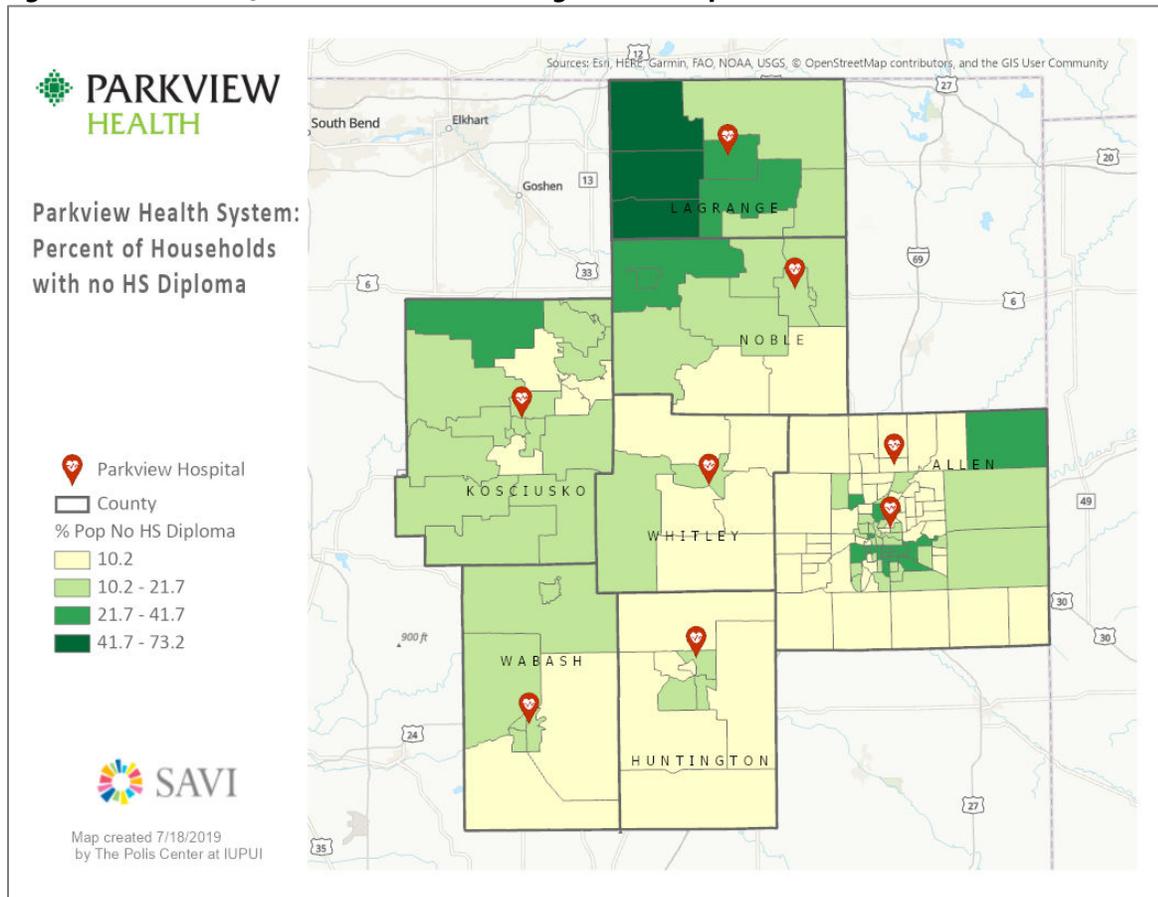
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Overall, the Parkview Health region seems to have almost similar percentage of population without a high school diploma as the rest of the state. However, racial disparities are still seen with educational attainment (*Figure 11*). A little less than half of the total Hispanic population constitutes of individuals who are without a high school diploma. These are followed by the Asian population where almost a third of the population is without a high school diploma. With these racial minorities already at a disadvantage in terms of income and poverty, this added inequity further deteriorates their chances of attaining good health outcomes.

LaGrange County is different from the rest Parkview region. Although, high rates for population without a high school diploma is seen for Hispanic and Asian populations 41.1% and 28.2% respectively; the non-Hispanic White population without high school diploma is the also very high 36.6%. (*Figure 11*).

Figure 11: Population without a High School Diploma by Race/Ethnicity
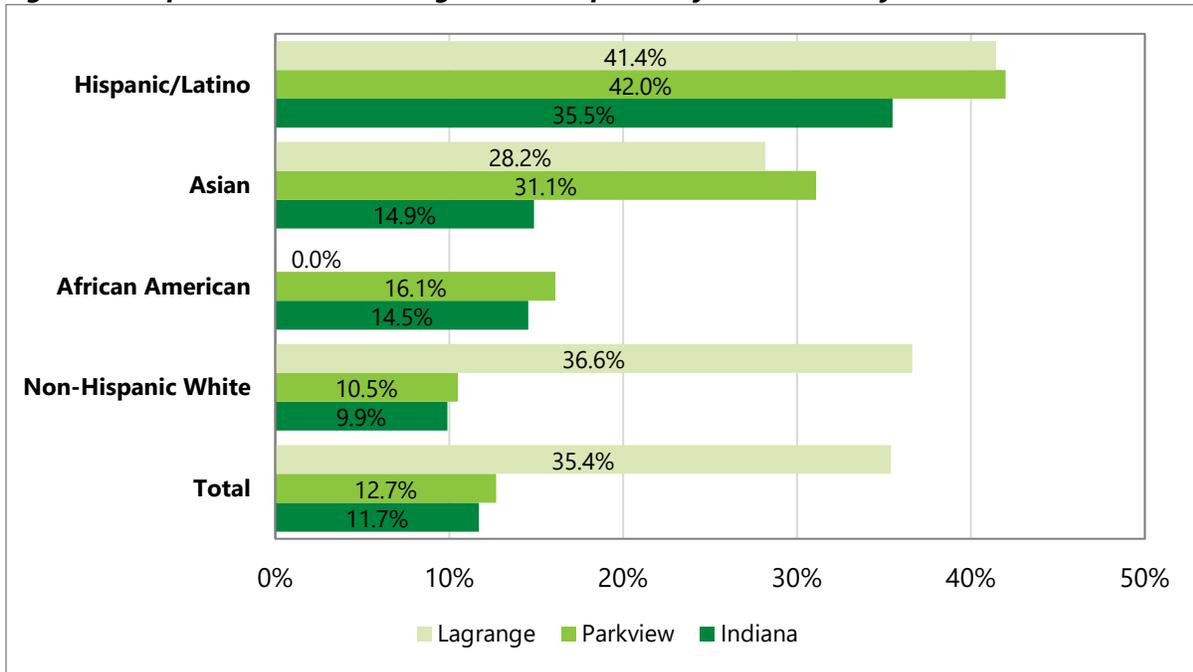
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

ACCESS TO HEALTHCARE

Access to healthcare is another important social determinant of health. It is commonly measured by lack of access to primary care services and by lack of health insurance.

Medically Underserved Areas and Populations

Medically underserved areas and medically underserved populations identify geographic areas and populations with a lack of access to primary care services. The Health Resources and Services Administration identified several medically underserved *areas (Figure 12,* light green) in the south-west end of the Parkview Health region. The percentage of medically underserved *populations* were identified mainly in Wabash County (*Figure 12*, darker green).

Figure 12: Medically Underserved Areas and Populations
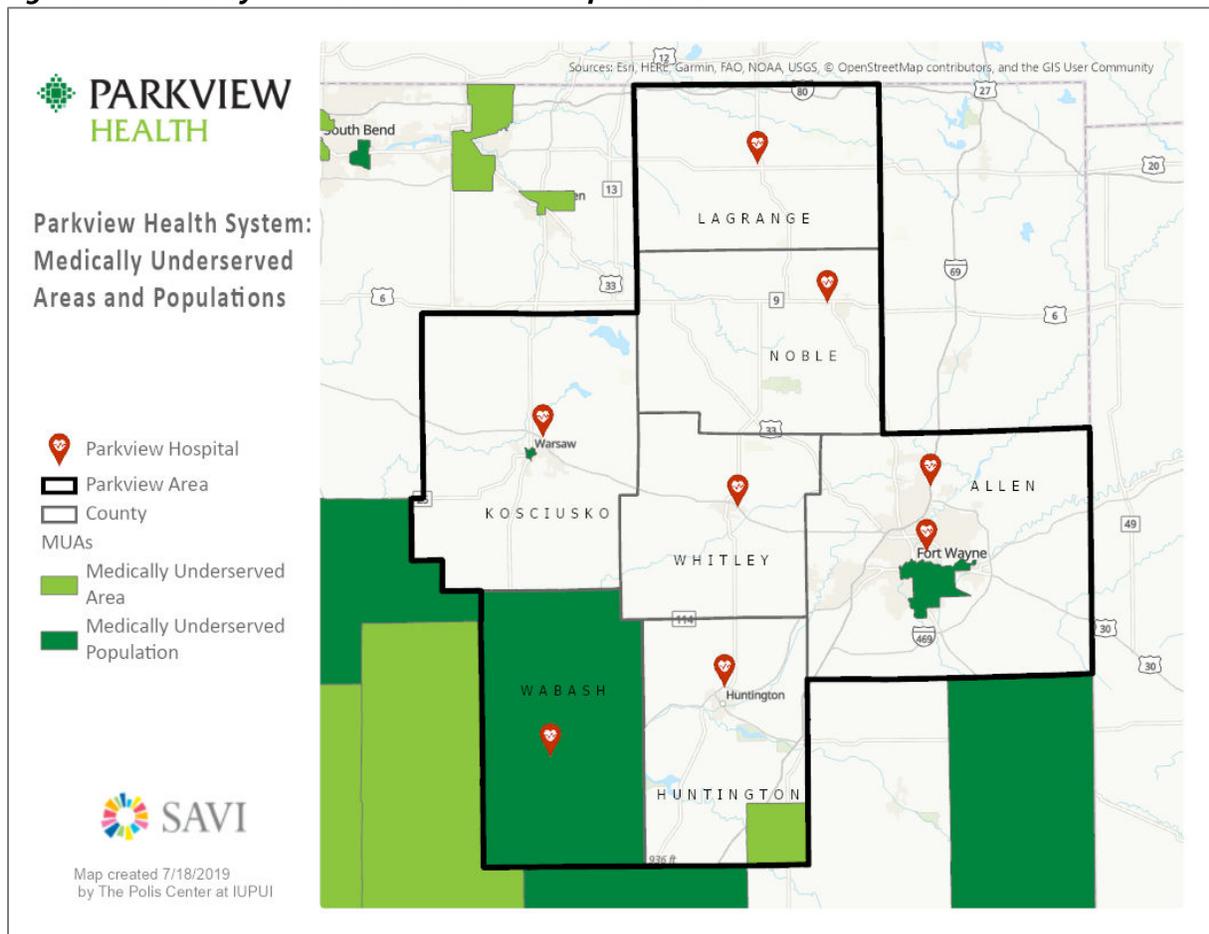
Source: Health Resources & Services Administration, 2019

Health Insurance

The percentage of the population without health insurance ranges from county-wide total of 7.6% in Whitley County to 39.7% in LaGrange County (*Table 9*). Again, it should be noted that the Amish population is counted as a part of the total population by the US Census Bureau. Because many Amish do not have health insurance and they make up a relatively high percentage of the population in LaGrange County, the numbers below may appear large relative to the state and nation. The map in *Figure 13* presents this information at the census tract level to illustrate the geographic distribution of those without health insurance.

Table 9: Health Insurance

Demographic	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
Population without health insurance	2017	10.8%	9.4%	11.8%	39.7%	9.2%	9.3%	7.6%	12.3%	10.3%
	2014	14.5%	11.8%	15.6%	44.5%	14.8%	10.3%	9.1%	15.8%	13.8%
Adults without health insurance	2017	14.7%	12.2%	15.1%	37.7%	12.1%	13.3%	10.9%	15.4%	14.0%
	2014	19.7%	16.4%	20.2%	45.0%	19.7%	15.0%	12.7%	12.3%	18.9%
Children without health insurance	2017	7.5%	8.3%	10.5%	53.1%	7.1%	6.4%	4.4%	11.2%	7.0%
	2014	9.1%	6.9%	12.8%	56.6%	10.5%	5.6%	5.1%	12.9%	8.2%

Source: US Census Bureau (American Community Survey Five-year Averages)

Figure 13: Percent of Population with No Health Insurance
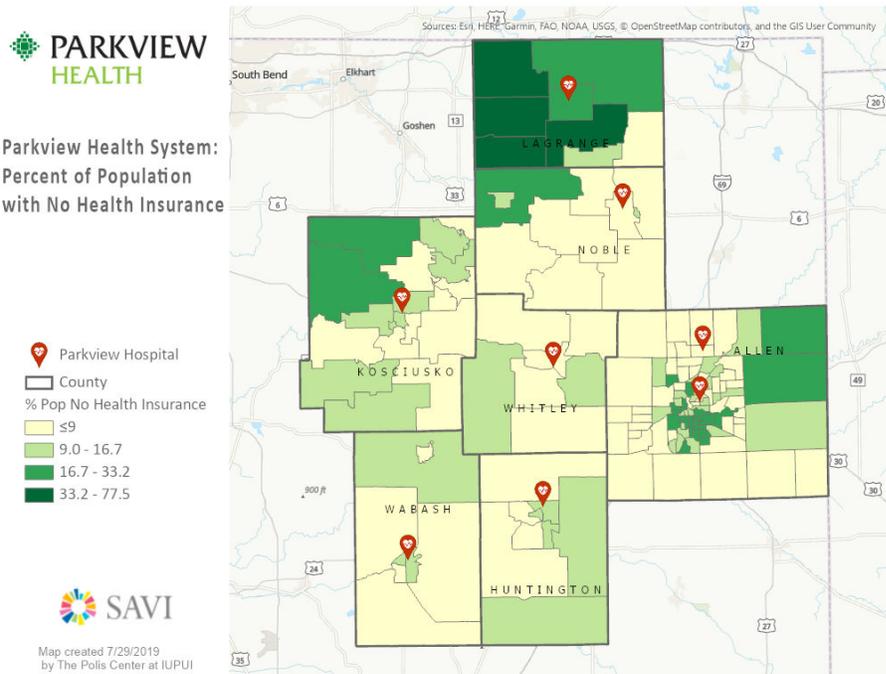
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Transportation

Transportation is a critical factor that influences people's health and the health of a community. As six of the seven counties in the service area are rural or mixed urban/rural, having a personal vehicle is of utmost importance as lower population density in rural areas often leads to lower ridership for fixed transit routes and a smaller tax base to fund maintenance and repair of transportation systems. It is evident from the map in *Figure 14* most of the counties have ≤ 5.4 households without a vehicle. LaGrange County shows a different picture. We can assume that due to high Amish population in LaGrange County the percentage of houses with no vehicle is higher i.e., 35 – 76 %. Amish population usually relies on horse carriages and wagons for their transport purposes. A slightly higher percentage of homes without a vehicle is also seen in northeast part of Allen County.

Figure 14: Households with No Vehicle
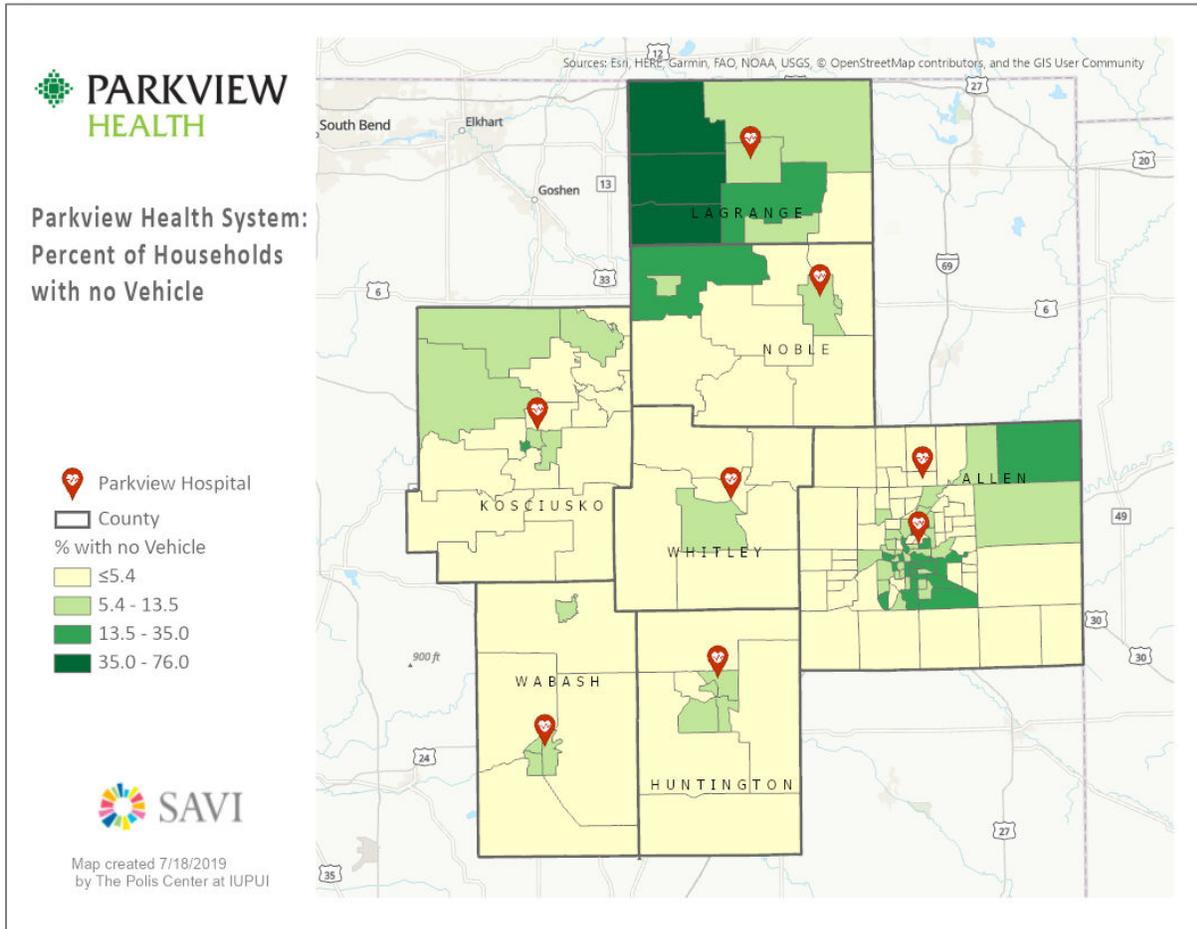
Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

DATA COLLECTION

The identification of health needs for Parkview Health region was carried out using two types of data: 1) secondary data from the Healthy Communities Institute (HCI) dashboard and other local and national agencies (e.g., County Health Rankings, etc.) and 2) primary data obtained through an online survey of Parkview healthcare providers (e.g., physicians, nurses, social workers, etc.) and a survey of community residents in each Parkview Health county. To supplement these data, a focus group was conducted with Hispanic community members in Kosciusko County and a survey of the Amish community was conducted in LaGrange County. These data sources are described in the following sections.

SECONDARY DATA

The Parkview Health Community Dashboard developed by HCI was used as a primary source of secondary data. This dashboard includes data from the Indiana Hospital Association as well as the Indiana State Department of Health, National Cancer Institute, Centers for Disease Control and Prevention, Centers for Medicaid and Medicare Services, the National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, Institute for Health Metrics and Evaluation, County Health Rankings website, US Census Bureau, US Department of Agriculture, and other sources. Additional state and national secondary data sources were accessed by the CHNA team for more recent and geographically specific information, including the following:

- **American Community Survey:** The American Community Survey (ACS) helps local officials, community leaders, and businesses understand the changes taking place in their communities. It is the premier source for detailed population and housing information about our nation.
- **Annie E. Casey Foundation:** The Annie E. Casey Foundation is a private philanthropic organization that works to build a brighter future for disadvantaged children in the United States. The KIDS COUNT Data Book offers a national look at the well-being of America's children and families by exploring how states are performing on key data indicators.
- **Center for Disease Control and Prevention:** As a federally-funded agency, CDC serves as a great resource for mortality and morbidity data for all the infectious and chronic diseases and other conditions.
- **County Health Rankings:** A Robert Wood Johnson Foundation program implemented by the University of Wisconsin Population Health Institute that releases new estimates annually measuring health across all US counties. These data are compiled from a variety

of providers and typically combines data across multiple years to release estimates for areas with small populations, such as rural counties.

- **Centers for Medicare & Medicaid Services:** The Centers for Medicare and Medicaid Services (CMS) provides health coverage to more than 100 million people through Medicare, Medicaid, and the Children's Health Insurance Program, and the Health Insurance Marketplace. The CMS seeks to strengthen and modernize the nation's health care system to provide access to high quality care and improved health at lower costs.
- **Feeding America:** A nonprofit organization working to feed America's hungry through food banks. Data are compiled from the Current Population Survey, American Community Survey, and Bureau of Labor Statistics to produce food-insecurity reports.
- **Indiana INdicators:** A free data resource providing current Indiana health-related data at the state and county levels and developed by the Indiana State Department of Health, Indiana Hospital Association, and Indiana Business Research Center.
- **Indiana State Department of Health (ISDH):** The ISDH's annual natality report includes information on live births in Indiana as well as a mortality report compiling information on the deaths of Indiana residents.
- **National Cancer Institute:** The National Cancer Institute (NCI) is the federal government's principal agency for cancer research and training. NCI maintain large registries of information about people diagnosed with cancer to help identify important issues that affect cancer patients and survivors.
- **National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention**: The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention is one of the larger centers at CDC and a federal source of data about sexually transmitted infections and diseases.
- **The National Environmental Public Health Tracking Network:** The Tracking Network brings together health data and environment data from national, state, and city sources and provides supporting information to make the data easier to understand.
- **US Census Bureau:** A leading source of data on the people and economy of the US.
- **2018 Indiana Association of Adult Day Services (IAADS) Survey:** The 5th Annual Indiana Adult Day Center Survey was conducted during the summer of 2018 by the Member Relations Committee of the IAADS Board of Directors. For the first time, centers were given the option to complete the survey online as well as by telephone. Seventy-seven percent of those responding used the online option. Results were tabulated based on individual survey data.

Results of the secondary data analysis are presented in **Secondary Data Analysis** section.

PRIMARY DATA

This assessment used four sources of community input: 1) an online survey of healthcare and social service providers; 2) a phone survey of the broader community; 3) a paper survey of the Amish community; and 4) a Hispanic focus group. The associated data collection efforts are described below. Results of the provider survey are included in **Provider Survey Results**

Parkview Provider Survey

An online survey of health and social service providers in the seven-county area was conducted in January 2019 to collect provider perceptions about community health needs and concerns. The survey was designed by Polis and FSPH in partnership with Parkview Health and implemented using Qualtrics, an online survey service. The Parkview Community Benefits team collaborated with the leadership team in each hospital to distribute the survey to health and social service providers in their county.

A total of 265 providers responded to the survey. The survey covered aspects of the provider's work including the setting in which they practiced, the duration of time in practice in the region/county, and their perception of the chief public health concerns, barriers to care, and available resources in their communities. The majority of respondents primarily practiced in Allen County (31.3%), followed by Huntington County (29.1%) (*Table 10*). LaGrange County constituted 10.2% of the provider survey respondents.

Table 10: Provider Survey Respondents

County	Count	% of Respondents
Allen	83	31.3%
Huntington	77	29.1%
Kosciusko	8	3.0%
LaGrange	27	10.2%
Noble	24	9.1%
Wabash	26	9.8%
Whitley	20	7.5%
Total	265	

Providers were asked about the duration for which they had been in practice in the LaGrange County. More than one-third (1/3) of the respondents had been in practice from 1- 5 years. Slightly more than a quarter (28%) had been in practice for 6-10 years (*Figure 15*).

Figure 15: Years Practiced in Parkview Area (LaGrange Provider Survey Respondents)
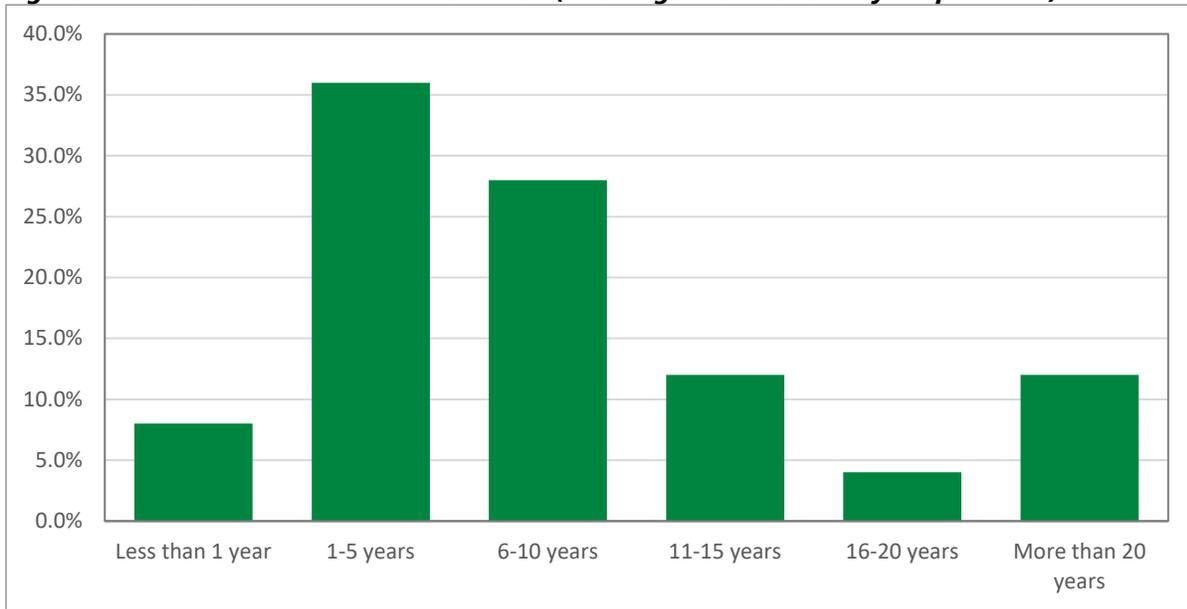
The highest proportion of provider survey respondents were registered nurses (22.2%), followed by educators/counselors (18.5%) (*Table 11*).

Table 11: Respondents by Provider Type

Profession	Allen (n=83)	Huntington (n=77)	Kosciusko (n=8)	LaGrange (n=27)	Noble (n=24)	Wabash (n=26)	Whitley (n=20)	All (265)
Physician	27.7%	10.4%	12.5%	11.1%	8.3%	11.5%	10.0%	**15.8%**
Physician's Assistant	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	**0.8%**
Nurse Practitioner	25.3%	2.6%	0.0%	0.0%	0.0%	7.7%	0.0%	**9.4%**
Registered Nurse	3.6%	11.7%	0.0%	22.2%	16.7%	11.5%	15.0%	**10.6%**
Mental/Behavioral Health	7.2%	1.3%	0.0%	3.7%	0.0%	3.8%	0.0%	**3.4%**
Nutritionist	0.0%	2.6%	0.0%	0.0%	8.3%	0.0%	0.0%	**1.5%**
Wellness Practitioner	1.2%	9.1%	0.0%	3.7%	4.2%	0.0%	0.0%	**3.8%**
Public Health/Community Health Practitioner	3.6%	5.2%	0.0%	3.7%	4.2%	7.7%	5.0%	**4.5%**
Social Worker/Case Management	10.8%	11.7%	25.0%	3.7%	16.7%	15.4%	15.0%	**12.1%**
Educator/Counselor	0.0%	6.5%	25.0%	18.5%	8.3%	7.7%	10.0%	**6.8%**
First Responder	0.0%	5.2%	0.0%	0.0%	4.2%	3.8%	0.0%	**2.3%**
Other Health	3.6%	9.1%	0.0%	0.0%	0.0%	7.7%	0.0%	**4.5%**
Other Social Services	3.6%	3.9%	0.0%	3.7%	8.3%	3.8%	0.0%	**3.8%**
Other	4.8%	9.1%	12.5%	18.5%	8.3%	15.4%	25.0%	**10.6%**
No response to this question	7.2%	11.7%	25.0%	11.1%	12.5%	3.8%	15.0%	**10.2%**

Community Survey

A community phone survey was conducted from April through June 2019 by the Survey Research Lab at the School of Public Health at the University of Alabama School, a partner of the Richard M. Fairbanks School of Public Health. The survey was designed to collect community perspectives on the top community health issues in the Parkview Health service area. A random, population sample of 700 individuals was selected from the seven-county Parkview Health service area (*Figure 16*). Eighty-three (83) of those individuals were from LaGrange County.
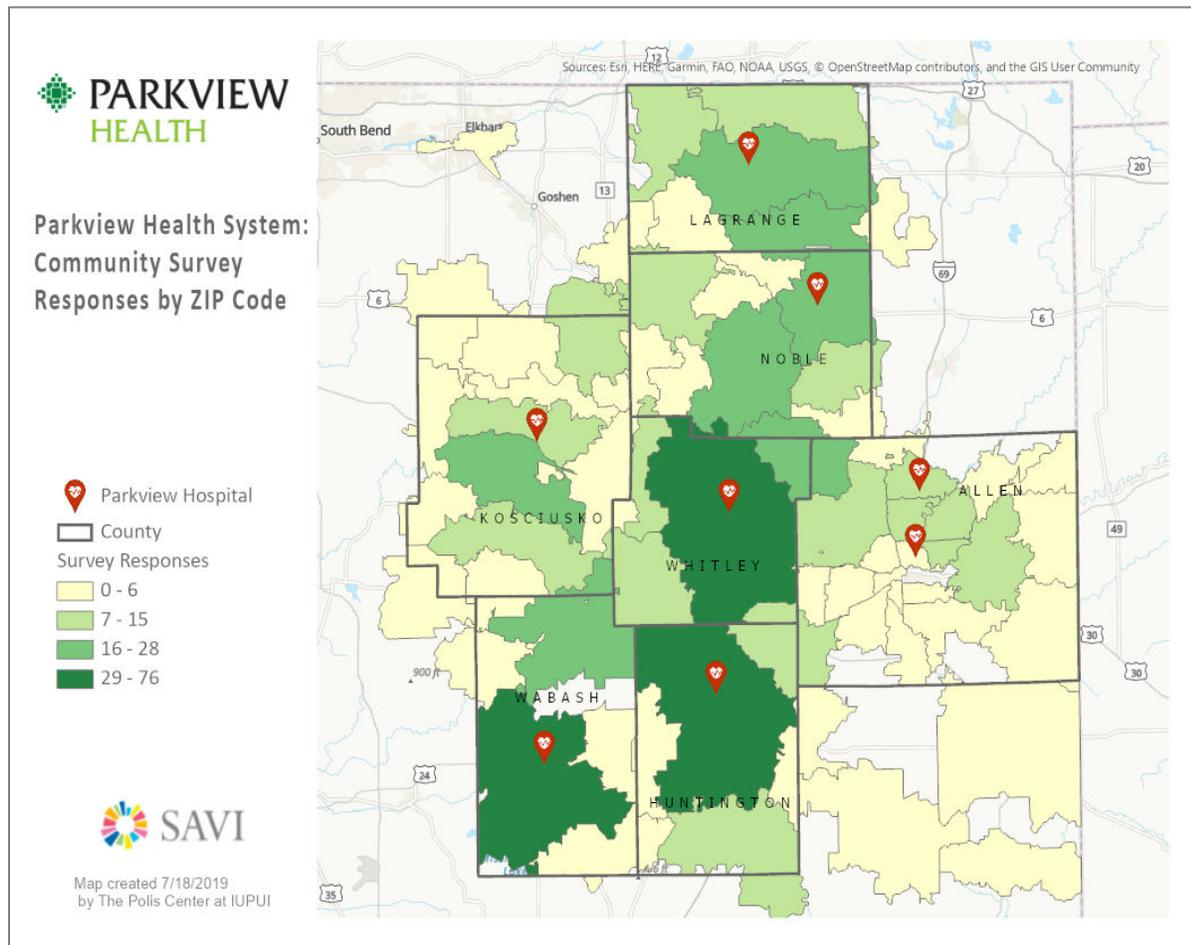
Figure 16: Community Survey Respondents by ZIP Code

One question asked respondents to choose what they perceived as top health concerns in their community. A second question asked respondents to indicate how important listed health and community services were for their community.

The survey results were algorithmically weighted to control for differences in the demographic makeup of survey participants compared to the total population of each region. Results of the community survey are included in **Community Survey Results.**

Amish Community Survey

A written Amish Community survey was administered from February through April 2019 to a convenience sample of 1) people who patronized the Topeka Pharmacy, which is highly trusted in the Amish community, 2) Amish members of the LaGrange Hospital Board of Directors, and 3) Amish members of the Parkview Health LaGrange Hospital Patient & Family Advisory Council.

The survey asked respondents to select five health issues from a list of 15; items were not ranked, nor were responders asked to add to the list provided or provide comments. One hundred and fifteen (115) Amish individuals completed the survey. *Figure 17* shows the distribution of the survey respondents by ZIP code.

Results of the community survey are included in **Amish Community Survey Results** section. A detailed report, including comparison of the survey results from 2016 and 2019, was produced as a companion to this CHNA report.

Figure 17: Amish Survey Respondents by ZIP Code
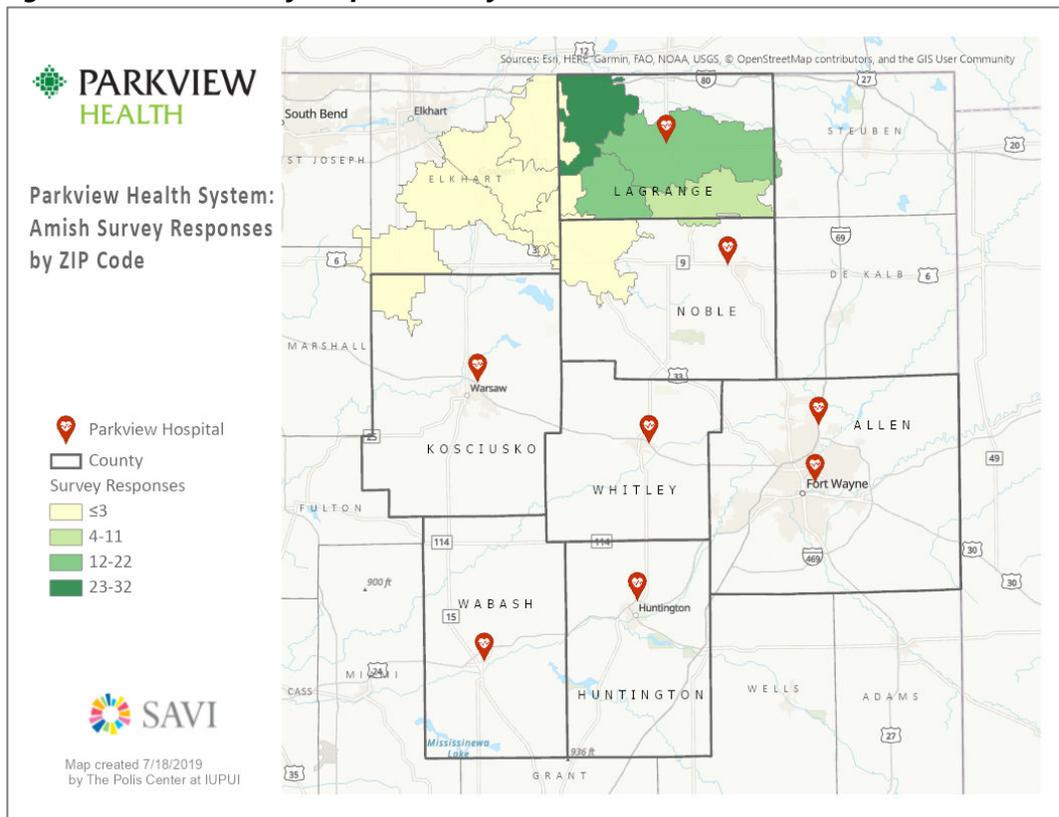
SECONDARY DATA ANALYSIS

COMMUNITY HEALTH ISSUES

Based on the review of more than two hundred (200) HCI indicators, *Table 12*: County Health Indicators Performing in the Bottom Quartile of the State lists the health outcomes and behavior for which any county in the Parkview Health primary service area was in the lowest performing quartile of Indiana counties. Each of these indicators was included in the assessment of community health problems and potential community health priorities.

Thirty-six (36) HCI health indicators were in the bottom performing quartile. Some HCI health indicators relate to the same health condition (e.g., incidence rate and age-adjusted death rate for breast cancer). If at least one indicator for a specific health condition was in the bottom quartile, that condition was considered a potential community health concern for Parkview Health. For example, breast cancer incidence rate was not in the bottom quartile for Kosciusko County, but the age-adjusted rate of breast cancer was. As such, breast cancer is considered a health concern for Kosciusko County. Indicators that were duplicative in terms of identifying a health condition as being of concern were removed, thus reducing the number of health indicators used for the CHNA to 28 indicators. The 28 indicators were categorized into 15 general health concerns, as shown in *Table 13.*

Associated rates for each of these indicators are included in **Appendix B** in the Size of Health Problem column.

Table 12: County Health Indicators Performing in the Bottom Quartile of the State

Health Issue (in alphabetical order)	Health Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Aging	Alzheimer's Disease or Dementia *						X	
	Osteoporosis*		X					
Alcohol Use	Alcohol-Impaired Driving Deaths	X					X	
Asthma	Asthma*	X	X	X			X	
Cancer	Breast Cancer‡			X			X	
	Oral Cavity and Pharynx Cancer†							X
	Prostate Cancer‡					X	X	X
Cardiovascular Disease	Cerebrovascular Disease (Stroke) ‡					X		
	Coronary Heart Disease‡						X	
	Hyperlipidemia: Medicare Population			X			X	
Chronic Kidney Disease	Chronic Kidney Disease*			X				
Respiratory Diseases	Chronic Lower Respiratory Diseases‡			X		X		
Diabetes	Diabetes‡						X	
Drug Use	Controlled Substances Dispensed				X			
	Non-Fatal ED Visits due to Opioid Overdoses						X	
Infectious Diseases	Salmonella Infection†		X	X		X	X	X
	Influenza and Pneumonia‡		X				X	
	Gonorrhea†	X						
	Chlamydia†	X						
	Hepatitis C Prevalence						X	
Maternal/Child Health	Mothers Who Did Not Receive Early Prenatal Care	X		X	X	X		
	Child Abuse Rate						X	
	Babies with Low Birth Weight			X				
Mental Health	Depression*	X						
Obesity	Adults 20+ who are Obese			X	X			
Tobacco Use	Adults who Smoke		X					
	Mothers who Smoked During Pregnancy						X	
Unintentional Injuries	Unintentional Injuries‡						X	
County		Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
# Indicators in the Lowest Quartile in the State		6	9	5	3	5	15	3

*Medicare population. †Incidence Rate. ‡Age-Adjusted Death Rate.   Data Source: Parkview Health Community Dashboard, 2019.

Aging

Alzheimer's disease is a chronic, incurable, progressive disorder that affects and disrupts cognition and eventually renders the patient unable to perform basic tasks. Most people with Alzheimer's begin to present symptoms in their 60s. Osteoporosis is an incurable disease that causes bones to become brittle leading to bone fracture and other complications ("FastStats - Osteoporosis," n.d.). It is most common in post-menopausal women. *Table 14* shows that Whitley County had the lowest age-adjusted death rates for both 2014 and 2017, as well as the lowest percentage of the Medicare population with osteoporosis in the same years.

Table 13: Aging   *Medicare population. ‡Age-Adjusted Death Rate.

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Alzheimer's Disease‡ (per 100,000)	2017	36.6	24.5	27.2	37.3	30.3	46.0	23.9
	2014	30.1	23.1	33.3	25.5	38.9	25.8	20.0
Alzheimer's Disease or Dementia* (%)	2017	11.4%	11.1%	10.3%	10.7%	9.7%	12.7%	10.2%
	2014	11.0%	10.5%	9.5%	8.3%	7.9%	10.4%	9.0%
Osteoporosis* (%)	2017	5.9%	7.1%	4.9%	4.9%	4.8%	6.3%	5.1%
	2014	5.7%	6.5%	4.5%	4.7%	5.2%	6.4%	4.6%

Cancer

Cancer (the suite of diseases resulting in abnormally and often uncontrollable growth of malignant cells) collectively forms the second leading cause of death in the United States. Although, overall mortality due to cancer continues to decline, it is still the second leading cause of death ("Cancer Data and Statistics | CDC," 2019). Table 15 compares the rates of cancer in each county. LaGrange County had an increase in breast and colorectal cancer between 2014 and 2017.

Table 14: Cancer (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Breast Cancer‡	2015	23.2	21.4	28.3	18.8	23.8	25.7	17.9
	2014	25.9	25.7	28.0	16.9	22.5	24.3	19.3
Colorectal Cancer‡	2015	14.8	17.5	18.6	12.0	15.7	15.4	12.3
	2014	15.6	17.0	16.2	10.9	16.9	13.2	13.1
Oral Cavity and Pharynx	2015	11.6	7.7	11.2	11.2	12.7	11.7	17.4
	2014	11.3	9.1	10.9	N/A	11.3	13.8	8.1
Prostate Cancer‡	2015	22.2	17.3	23.1	22.7	26.4	27.0	31.5
	2014	21.4	24.8	23.8	N/A	31.0	28.5	39.9

†Incidence Rate. ‡Age-Adjusted Death Rate.

Cardiovascular Disease

Heart disease is the leading cause of death according to the CDC ("Heart Disease Facts & Statistics | cdc.gov," 2018). The most common of these is coronary artery disease, which can lead to heart attack ("Heart Disease Facts & Statistics | cdc.gov," 2018). Heart disease affects populations of all races and genders, and usually occurs in middle age. *Table 16* shows that LaGrange County had an increase in coronary heart disease, but a decrease in the reported rates of strokes, heart attacks, and hyperlipidemia.

Table 15: Cardiovascular Disease (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Coronary Heart Disease‡	2017	85.1	99.6	93.0	92.7	96.1	120.1	90.6
	2014	90.7	101.7	92.7	77.1	119.3	97.6	98.0
Stroke‡	2017	36.5	42.6	38.3	34.8	46.2	45.5	37.9
	2014	39.2	63.2	41.9	54.1	46.8	35.5	27.3
Heart Attacks‡	2016	61.5	62.0	68.9	57.7	55.7	99.3	60.9
	2014	69.4	69.1	71.5	62.6	62.0	96.8	68.8
Hyperlipidemia *(%)	2017	39.4%	44.4%	42.1%	37.4%	35.3%	44.5%	39.2%
	2014	42.8%	43.5%	45.1%	41.0%	41.3%	41.1%	41.0%
Stroke* (%)	2017	3.9%	3.4%	3.6%	2.2%	3.2%	3.3%	2.8%
	2014	3.9%	3.2%	3.1%	2.6%	2.8%	3.2%	3.1%

*Medicare Population. ‡Age-Adjusted Death Rate.

Chronic Kidney Disease

Chronic kidney disease is a gradual loss of kidney function. In the early stages of this disease, it is possible that very few signs or symptoms will be present, but the disease can lead ultimately to kidney failure and death (*National Chronic Kidney Disease Fact Sheet, 2017*, n.d.). *Table 17* shows that LaGrange County had the lowest prevalence of chronic kidney disease than the other Parkview counties, but similarly had an increase between 2014 and 2017.

Table 16: Chronic Kidney Disease

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Chronic Kidney Disease*	2017	24.7%	28.8%	23.6%	21.4%	23.8%	24.4%	22.2%
	2014	18.0%	21.8%	16.1%	14.0%	14.9%	17.5%	16.3%
Kidney Disease‡ (per 100,000)	2017	21.8	27.6	13.1	N/A	23.4	16.3	20.6
	2014	24.9	31.2	15.1	N/A	18.5	15.5	N/A

*Medicare population. ‡Age-Adjusted Death Rate.

Diabetes

Diabetes is a group of diseases which affect the way the body uses blood sugar. A diabetes diagnosis means a person has too much blood sugar, which can lead to other more serious health complications ("Diabetes and Prediabetes | CDC," n.d.) (*Table 18)*.

Table 17: Diabetes

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Diabetes‡ (per 100,000)	2017	27.2	30.8	30.2	26.3	29.9	28.9	22.0
	2014	21.8	18.1	30.3	25.9	32.4	45.3	26.2
Diabetes*(%)	2017	26.3	27.8	27.4	26.5	27.2	29.4	26.7
	2014	25.3	26.5	27.4	25.8	26.6	27.2	24.4

‡Age-Adjusted Death Rate. *Medicare population.

Drug and Alcohol Abuse and Addiction

Drug use and dependence can cause accidental death, unintentional injury, or other health problems. Substance abuse is preventable and may be treatable. According to the CDC, excessive alcohol use can lead to an increased risk of health problems, such as liver disease ("CDC - Fact Sheets-Alcohol Use And Health: Alcohol," 2018) and unintentional injuries. LaGrange County had the second highest percentage of adults who drink excessively at 18.2% in 2017 (*Table 19*).

Table 18: Substance Abuse

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults who Drink Excessively (%)	2016	18.7%	17.7%	17.3%	18.2%	17.8%	16.9%	18.0%
	2014	16.2%	15.6%	16.3%	16.4%	15.8%	14.9%	16.1%
Alcohol-Impaired Driving Deaths (%)	2017	33.3%	17.4%	16.7%	15.0%	9.4%	29.0%	22.2%
	2014	30.2%	4.6%	36.6%	34.2%	11.1%	23.7%	29.2%
Non-Fatal ED Visits - Opioid Overdoses ^	2017	88.8	107.3	98.5	N/A	56.7*	159.0	137.5*
	2014	13.9	65.5**	28.0	N/A	N/A	77.8**	N/A
Controlled Substances Dispensed ^^	2016	0.8	1.0	0.9	3.3	0.9	1.2	1.0
	2014	1.5	1.9	1.6	0.9	1.7	2.0	1.9
Substance Abuse Treatment Rate: Alcohol ^	2015	198.9	122.9	165.4	172.6	184.4	329.8	110.8
	2014	197.9	92.6	113.3	179.5	182.7	257.3	104.8

*2016 data. **2015 data. ^per 100,000. ^^per capita

Food Safety

Salmonellosis is an infection with salmonella bacterium. Salmonella are usually transmitted to humans by eating foods contaminated with animal feces. Contaminated foods are often of animal origin, such as beef, poultry, milk, or eggs, but any food, including vegetables, may become contaminated. Most persons infected with salmonella develop diarrhea, fever, and abdominal cramps 12 to 72 hours after infection ("Salmonella Homepage | CDC," 2019). The illness usually lastsfour4 to seven days, and most persons recover without treatment. *Table 20 i*ndicates that the highest rate of salmonella infection in 2017 was in Whitley County at 23.7 per 100,000 population (*Table 20*).

Table 19: Food Safety (per 100,000)   *2016 data. **2015 data. †Incidence Rate.

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Salmonella Infection†	2017	13.1	16.5	20.2	15.3	16.9	22.3	23.7
	2014	7.9	24.7*	17.8	28.1*	21.0	15.7*	23.9**

Infectious Disease

Hepatitis C and influenza are types of infectious diseases caused by viruses. Hepatitis C is a contagious liver disease ranging from mild to severe illnesses transmitted primarily from the sharing of needles. Influenza is a contagious disease that in most cases causes the complication of pneumonia. Wabash County had the highest prevalence rate of Hepatitis C in 2017 and 2014, 194.0 and 77.5, respectively. In 2017, Huntington County had the highest age-adjusted death rate of influenza and pneumonia at 27.7 per 100,000 population (*Table 21*). Data for LaGrange is not available.

Table 20: Infectious Disease (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Hepatitis C Prevalence	2017	83.1	82.6	72.0	N/A	48.5	194.0	N/A
	2014	65.6	54.5	39.5	N/A	52.5	77.5	N/A
Influenza/ Pneumonia‡	2017	9.3	27.7	17.0	N/A	15.7	19.3	N/A
	2014	12.4	18.7	16.5	N/A	18.0	17.0	20.6*

*2012 data. ‡Age-Adjusted Death Rate.

Maternal, Infant, and Child Health

Maternal, infant, and child health care is a broad category which encompasses a variety of health indicators related to pregnancy, birth, and complications at the time of and immediately following birth. Affected populations include mothers and their children. Although the percentage of mothers who did not receive prenatal care during the first trimester of pregnancy decreased for all Parkview counties, LaGrange County had the highest percentage (56.2%) and Huntington County had the lowest (23.6%). In contrast, Huntington County had the highest percentage of preterm births (11.1%) and LaGrange County had the lowest percentage of mothers who smoked during pregnancy (6.2%). The rate of child abuse cases per 1,000 children was highest in 2017 and 2014 in Wabash County, 26.3 and 26.9, respectively (*Table 22*).

Table 21: Maternal, Infant and Child Health

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Babies with Low Birth Weight (%)	2017	8.8%	9.7%	6.7%	6.9%	5.7%	7.9%	5.8%
	2014	9.4%	7.0%	7.6%	5.6%	6.2%	9.1%	7.3%
Child Abuse Rate§	2015	10.3	16.6	8.4	10.2	18.1	26.3	13.3
	2014	8.9	20.7	6.8	11.6	11.5	26.9	10.2
Mothers with no prenatal care in 1st trimester (%)	2017	41.6%	23.6%	55.7%	56.2%	37.7%	28.2%	30.8%
	2014	45.2%	32.2%	63.8%	62.1%	38.4%	36.1%	32.8%
Mothers who Smoked During Pregnancy (%)	2017	10.3%	21.5%	15.1%	6.2%	16.7%	26.3%	14.1%
	2014	10.3%	16.8%	15.6%	6.7%	19.0%	25.2%	17.5%
Preterm Births (%)	2017	9.6%	11.1%	8.4%	7.7%	6.5%	10.1%	9.2%
	2014	10.1%	7.2%	9.0%	5.6%	8.7%	9.4%	8.7%

§Cases per 1,000 children.

Mental Health

Depression is a serious illness that affects an individual's ability to perform daily tasks or cope with daily life. Individuals with depression are at higher risk for other mental illnesses, injury, or death ("NIMH» Depression," n.d.). Depression is also linked to economic and social burdens, which may perpetuate depressive episodes. Depression among the Medicare population was lowest in 2017 for LaGrange County (17.8%) (*Table 23*).

Table 22: Mental Health   *Medicare population

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Depression*(%)	2017	21.2%	20.8%	18.4%	17.8%	19.8%	19.7%	18.1%
	2014	20.7%	18.2%	16.4%	16.7%	19.0%	15.4%	18.1%

Obesity

Obesity (having a body mass index greater than 30.0) affects all age groups and disproportionately affects people of lower socioeconomic statuses and racial/ethnic groups. There are many complications that can occur as a direct or indirect result of obesity. *Table 24* shows the percentage of adults who are obese.

Table 23: Obesity

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults 20+ who are Obese (%)	2015	31.6%	33.9%	36.4%	36.8%	33.2%	34.2%	35.4%
	2014	28.7%	31.9%	34.3%	34.1%	33.9%	32.7%	36.6%

Respiratory Diseases

Respiratory diseases affect the lungs and other parts of the respiratory system. Chronic lower respiratory disease (CLRD) refers to a diverse group of disorders, such as asthma, emphysema, bronchitis, and chronic obstructive pulmonary disease. Asthma is a chronic, incurable disease which causes many symptoms that make breathing difficult ("CDC - Data and Statistics - Chronic Obstructive Pulmonary Disease (COPD)," 2019). The disease burden is high due to expensive and potentially life-long costs associated with managing symptoms of asthma.

Table 25 shows the percentage of the Medicare population who have asthma. Since 2014, the percentage of asthma among the Medicare population has increased in four counties, while decreasing slightly in LaGrange County. The age-adjusted death rate for CLRD was highest in 2017 and 2014 for Noble County (72.7 and 78.3 per 100,000, respectively)

Table 24: Respiratory Disease (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Asthma* (%)	2017	6.1%	6.6%	5.6%	3.5%	5.0%	5.7%	5.0%
	2014	5.6%	6.0%	4.5%	3.6%	5.5%	4.8%	5.5%
Chronic Lower Respiratory Diseases‡	2017	50.3	69.4	53.4	50.2	72.7	54.7	49.4
	2014	54.5	58.6	63.3	48.1	78.3	64.7	54.7

*Medicare population. ‡Age-Adjusted Death Rate.

Sexually Transmitted Infections

Chlamydia and gonorrhea are two common sexually transmitted diseases (STD) that, in some cases, present no symptoms, but can lead to serious health problems if left untreated ("Chlamydia - STD information from CDC," 2019; "Gonorrhea - STD information from CDC," 2019) . Younger populations, those with multiple partners, and those who do not use a condom during sex are at high risk to contract these and other sexually transmitted infections. Those who have or have had sexually transmitted infections in the past are at even greater risk. Allen County had the highest incidence rates of chlamydia and gonorrhea in both 2017 and 2014 (*Table 26*).

Table 25: Sexually Transmitted Infections (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Chlamydia†	2016	597.9	294.8	281.1	118.5	331.0	227.1	317.3
	2014	514.6	252.8	198.8	60.5	250.2	182.3	144.2
Gonorrhea†	2016	188.1	43.7	64.9	10.3	60.8	34.2	35.9
	2014	151.8	19.0	62.9	7.9	46.2	12.4	15.0

†Incidence Rate.

Tobacco Use/Smoking

Smoking is the leading cause of preventable death (CDC Tobacco Free, 2017). People of all ages, races, and genders are susceptible to the effects of smoking and secondhand smoke. *Table 27* shows the adult smoking rate for Parkview counties. The smoking rate decreased in LaGrange County between 2014 and 2016.

Table 26: Smoking

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults who Smoke (%)	2016	18.8%	21.8%	18.7%	20.7%	20.8%	18.9%	18.6%
	2014	20.4%	21.5%	18.5%	22.2%	20.4%	19.2%	18.1%

Prevention and Safety

Unintentional injuries are a leading cause of death for Americans of all ages, regardless of gender, race, or economic status. Major categories of unintentional injuries include motor vehicle collisions, poisonings, and falls. Table 28 shows that Wabash County had the highest age-adjusted death rates for 2017 and 2014 (74.0 and 59.9, respectively). In 2014, LaGrange had the second highest reported rate of motor vehicle traffic collisions. A rate for 2017 was not reported by HCI.

Table 27: Prevention and Safety (per 100,000)   *2012 data. ‡Age-Adjusted Death Rate

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Motor Vehicle Traffic Collisions‡	2017	10.2	N/A	14.1	N/A	N/A	28.7	N/A
	2014	8.7	N/A	12.0	19.2*	14.7*	34.6	N/A
Unintentional Injuries‡	2017	50.6	53.8	51.4	26.1	44.9	74.0	47.6
	2014	39.0	41.7	42.0	33.5	49.7	59.9	35.2

SOCIAL DETERMINANTS OF HEALTH (SDOH)

Social determinants of health are the conditions in which people are born, grow, live, work and age. These indicators affect a wide range of health risks and outcomes. (Artiga, May 10, 2018). SDOH include factors like socioeconomic status, education, neighborhood, physical environment, employment, and social support networks, as well as access to health care. The effect of individual social determinants of health is difficult to discern as these factors are interdependent and interconnected. Evidence shows that poverty limits access to food, safe neighborhoods, and better education. On the other hand, poorer neighborhoods are severely affected by food insecurities and lower educational status. These ultimately lead to poor health outcomes and reduced life expectancies. A person's ZIP Code can affect his or her health which ultimately leads to a concentration of health disparities in geographical locations identified as poor neighborhoods. Considering the Maslow's Hierarchy of Needs pyramid, it is evident that basic needs like food, shelter, safety, and security serve as the basis of better overall physical and mental health of individuals (Mcleod, n.d.). Focused social determinants of health, also referred to as "upstream" factors by the public health sector, decrease the risk of diseases and the predisposing behavioral and other risk factors (Booske, Athens, Kindig, Park, & Remington, n.d.). *Table 29* and *Table 30* list the social indicators and access indicators, respectively, for which counties in the Parkview region are in the bottom-performing quartile.

Table 28: County Social Indicators in the Bottom-Performing Quartile of the State

Social Issue	Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Economy	Households with Cash Public Assistance Income						X	
	Per Capita Income				X			
Education	4th Grade Proficiency in English/Language Arts					X		
	4th Grade Proficiency in Math						X	
	8th Grade Proficiency in English/Language Arts					X	X	
	High School Graduation						X	
	People 25+ w/ a Bachelor's Degree or Higher				X			
	People 25+ w/ a High School Degree or Higher			X	X	X		
	Student-to-Teacher Ratio	X						X
Employment	Female Population 16+ in Civilian Labor Force				X			
	Total Employment Change			X				X
Social Environment	Households w/ Internet Subscription				X			
	Households w/ >=1 Types of Computing Devices				X			
	People 65+ Living Alone	X						
	Voter Turnout: Presidential Election	X				X		
County		**Allen**	**Huntington**	**Kosciusko**	**LaGrange**	**Noble**	**Wabash**	**Whitley**
# Indicators in Lowest Quartile in State		3	0	2	6	4	4	2

Data Source: Parkview Health Community Dashboard, 2019.

Table 29: County Access Indicators in the Bottom Performing Quartile of the State

Issue	Access Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Access to Health Services	Adults with Health Insurance: 18-64			X	X	X		
	Persons with Health Insurance			X	X	X		
	Children with Health Insurance			X	X			
	Clinical Care Ranking			X	X	X		
	Non-Physician Primary Care Provider Rate†				X	X	X	X
	Primary Care Provider Rate†				X	X		
	Dentist Rate†				X			
	Mental Health Provider Rate†				X			
	Preventable Hospital Stays*					X		
Food Access	Food Insecure Children Likely Ineligible for Assistance							X
	Food Insecurity Rate	X						
	Children with Low Access to a Grocery Store	X						
	Low-Income and Low Access to a Grocery Store	X	X					
	People 65+ with Low Access to a Grocery Store	X	X					
	People with Low Access to a Grocery Store	X	X					
	Households w/o Car & Low Access to Grocery Store				X			
	Fast Food Restaurant Density		X				X	
	SNAP Certified Stores				X	X		
Access to Safe and Healthy Environment	Physical Environment Ranking			X		X		
	Houses Built Prior to 1950		X				X	
	Violent Crime Rate	X						
	Access to Exercise Opportunities				X			
Housing Affordability and Supply	Homeownership			X				
	Spending >=30% Household Income on Rent		X					
	Severe Housing Problems				X			
Transportation	Households without a Vehicle				X			
	Workers Commuting by Public Transportation			X		X		
	Workers who Drive Alone to Work						X	X
	Workers who Walk to Work	X						X
County		Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
# Indicators in the Lowest Quartile in the State		7	6	7	13	9	4	4

*Medicare population. †Providers per 100,000 population. Data Source: Parkview Health Community Dashboard, 2019.

Access to Health Services

Access to comprehensive, quality healthcare services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans. LaGrange County had the lowest percentage of adults with health insurance ages 18-64, children with health insurance, dentist rate, mental health provider rate, persons with health insurance, and primary care provider rate (*Table 31*). LaGrange County is also home to a large Amish population who may be using other means of healthcare mentioned in these categories.

Table 30: Access to Health Services

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults with Health Insurance: 18-64 (%)	2017	89.0%	91.0%	87.0%	75.7%	88.0%	89.5%	90.3%
Children with Health Insurance (%)	2017	93.2%	95.0%	91.0%	74.7%	93.2%	94.3%	94.2%
Dentist Rate†	2017	64	41	32	23	27	41	41
Mental Health Provider Rate†	2018	164	63	144	28	82	198	66
Non-Physician Primary Care Provider Rate†	2018	143	69	43	33	21	25	18
Persons with Health Insurance (%)	2017	90.3%	92.1%	88.2%	75.1%	89.6%	90.8%	91.4%
Preventable Hospital Stays* (per 1,000)	2015	52.5	67.0	59.2	55.6	79.2	50.7	40.8
Primary Care Provider Rate†	2016	65	63	40	26	27	41	54

*Medicare population. †Providers per 100,000 population.

Built/Physical Environment

The built environment is the space in which we live, work, learn, and play. It includes workplaces and housing, businesses and schools, landscapes and infrastructure. Built environment influences the public's health, particularly in relation to chronic diseases.

Despite significant evidence that an active lifestyle along with proper nutrition and reduced exposure to toxic conditions can lower the burden of chronic disease, our built environments are not well-designed to facilitate healthy behaviors or create good health conditions. LaGrange County had the lowest access to exercise opportunities (26.4%) while Allen County had the highest (78.5%) (*Table 32*). Huntington County had the highest percent of households built prior to 1950, at 45.8%. Households built prior to 1950 could be a concern for the public's health if they have not undergone substantial updates to remove lead-based paint.

This type of paint is a toxin that causes nervous system damage, stunted growth, and delayed development.

Table 31: Built/Physical Environment

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Access to Exercise Opportunities	2019	78.5%	76.3%	67.4%	23.4%	64.0%	67.7%	57.4%
Households Built Prior to 1950	2013-2017	19.6%	45.8%	22.8%	25.3%	30.5%	44.1%	28.0%

*Households.

Economy

The lower one's income, the higher the risk of disease and premature death. As shown in *Table 33,* per capita income in Parkview Region is highest in Whitley County ($28,073) and lowest in LaGrange County ($22,780). The highest percentage of population with Cash Public Assistance is in Wabash (2.3%) and lowest in Whitley County (0.9%)

Among minorities, income is one of the driving forces behind health disparities. Racial health disparities observed among non-Hispanic Whites, Blacks, and Hispanics are minimized by the disparities due to income observed within each racial group. That is, higher-income Blacks, Hispanics, and Native Americans have better health than members of their groups with less income and this income gradient appears to be more strongly tied to health than their race or ethnicity.

Table 32: Economy

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Asset Limited, Income Constrained, Employed*	2016	22.1%	26.5%	28.4%	29.3%	25.7%	25.0%	21.5%
Cash Public Assistance Income (%)*	2013-2017	2.2%	1.7%	1.8%	1.0%	1.5%	2.3%	0.9%
Per Capita Income ($)	2013-2017	$26,932	$24,222	$27,884	$22,780	$25,260	$24,700	$28,073

*Households.

Education

Education has an indirect effect on the health of individuals. Education is important for higher-paid jobs, economic productivity and a healthier population. Educational attainment not only defines income status and job opportunities; it also affects life expectancy. Between 1990 and 2008, the life expectancy gap between the most and least educated Americans grew from

13 to 14 years among males and from 8 to 10 years among females (Rosoff & Lohoff, 2019). The gap has widened since the 1960s. Individuals with low educational attainment levels have a higher risk of heart disease, diabetes, and diminished physical abilities due to health reasons, or are disabled. They also tend to have higher rates of risky behaviors like smoking, drinking, and illicit drug use.

Table 34 shows educational attainment level in the Parkview region. Kosciusko County had the highest high school graduation percentage at 92.6%, while LaGrange County had the lowest (63.3%). Allen County had the highest percentage of people with a bachelor's degree or higher (27.5%), while LaGrange County had the lowest (9.9%).

Table 33: Education

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
4th Grade Students Proficient in English/Language Arts (%)	2017	63.2%	74.4%	65.0%	65.4%	58.0%	69.4%	64.2%
4th Grade Students Proficient in Math (%)	2017	56.9%	62.9%	62.9%	67.0%	57.7%	54.9%	60.3%
8th Grade Students Proficient in English/Language Arts (%)	2017	61.8%	70.7%	58.3%	63.9%	51.5%	55.7%	63.5%
High School Graduation (%)	2017	91.8%	91.8%	92.6%	92.3%	91.2%	87.1%	91.3%
People 25+ with a Bachelor's Degree or Higher (%)	2013-2017	27.5%	18.1%	22.3%	9.9%	14.0%	18.7%	19.5%
People 25+ with a High School Degree or Higher (%)	2013-2017	89.4%	90.5%	84.8%	63.3%	85.0%	88.7%	91.1%
Student-to-Teacher Ratio (Students per teacher)	2016-2017	18.5	15.2	16.3	15.2	16.1	17.2	18.1

Employment

Employment has a multifaceted effect on the health of individuals. Well-paid jobs translate into better access to nutritious food, education, healthier/safer neighborhoods, and good health insurance benefits for individuals and their families. Conversely, low-paid jobs or job layoffs result in poor health and stress-related conditions such as stroke, heart attack, heart disease, or arthritis. Additionally, good health influenced by healthy and safe working conditions.

The total employment change was positive for most counties, but Kosciusko and Whitley Counties decreased by 1.1% and 2.7%, respectively (*Table 35*). LaGrange County had the highest increase in total employment.

Table 34: Employment

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Female Population 16+ in Civilian Labor Force)	2013-2017	62.0%	59.6%	57.2%	47.1%	59.8%	55.3%	57.0%
Total Employment Change	2015-2016	2.4%	2.1%	-1.1%	4.4%	3.7%	2.2%	-2.7%

Food Security

Food security measures accessibility to and affordability of food. According to the World Health Organization (WHO), the three pillars of food security are availability, access, and use/misuse ("What is food security? | WFP | United Nations World Food Programme-Fighting Hunger Worldwide," n.d.). On the other hand, food insecurity refers to the inability to afford enough food for an active, healthy life ("Food Insecurity," n.d.). Food insecurity is associated with adverse health outcomes in children and adults. It is linked to an increased risk of depression, cardiovascular disease, and peripheral arterial disease in older adults (Laraia, 2013). Access to healthy, nutritious food—including fruits and vegetables—is of utmost importance to live a healthy lifestyle.

Allen County has the highest rate of children with low access to a grocery store, the highest food insecurity rate, the greatest population with low-income and low access to a grocery store, the most people ages 65+ with low access to a grocery store, and greatest number of people with low access to a grocery store (*Table 36*). In contrast, LaGrange County had the lowest rates of low food access.

Table 35: Access to Food   *Per 1,000 population*

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Children w/ Low Access to a Grocery Store	2015	7.8%	5.4%	4.9%	0.0%	1.7%	1.9%	1.3%
Fast Food Restaurant Density*	2014	0.66	0.84	0.69	0.21	0.55	0.81	0.60
Food Insecurity Rate	2017	13.3%	11.4%	10.0%	9.2%	9.4%	11.9%	10.1%
Households w/ No Car and Low Access to a Grocery Store	2015	2.7%	2.1%	3.1%	21.4%	2.9%	2.6%	1.5%
Low-Income and Low Access to a Grocery Store	2015	9.8%	8.5%	5.6%	0.1%	2.1%	4.7%	1.9%
65+ with Low Access to a Grocery Store	2015	3.8%	3.6%	2.4%	0.0%	0.5%	1.1%	0.6%
Low Access to a Grocery Store	2015	30.4%	22.2%	18.3%	0.2%	5.7%	10.5%	5.1%
SNAP Certified Stores*	2016	0.8	0.8	0.8	0.5	0.7	0.9	0.8

Homeownership and Housing Affordability

The net income and wealth of an individual affects homeownership. "Housing is commonly considered *affordable* when a family spends less than 30 percent of its income to rent or buy a residence ("How Does Housing Affect Health?," 2011). The shortage of affordable housing limits a family's options in choosing their place of residence. This ultimately leads to poor families living in subsidized housing in neighborhoods that are unsafe and lack the assets needed for healthier lifestyle e.g., parks, bike paths, walking tracks, recreational activities, and grocery stores with healthy selections. The burden faced by families to afford housing affects their ability to meet other essential needs like nutrition and healthcare.

Whitley County had the highest percentage of homeownership at 73.4% and Kosciusko County had the lowest at 59.5%. Severe housing problems are highest in LaGrange County (15.1%). Huntington County has the least affordable rental housing with nearly half of the renters spending more than 30% of their income (*Table 37*).

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Homeownership	2013-2017	62.5%	69.8%	59.5%	68.0%	66.4%	67.5%	73.4%
Renters Spending 30% or More of Household Income on Rent	2013-2017	45.1%	47.3%	37.9%	32.0%	39.8%	45.0%	39.9%
Severe Housing Problems	2011-2015	11.8%	10.6%	10.9%	15.1%	12.2%	10.9%	8.5%

Table 36: Homeownership

Public Safety

Public safety is another important social determinant of health. Just as affordable housing is important in achieving positive health outcomes, the conditions/environment surrounding the housing affect health outcomes. High crime rates can lead to mental distress, a lower quality-of-life, an increase in negative health outcomes, premature death, or non-fatal injuries (Margolin, Vickerman, Oliver, & Gordis, 2010). An example of the negative effect of a high crime rate in the neighborhood is a reluctance of residents to walk outdoors or permit their children to play or bike outside, which encourages obesity and related health issues.

The violent crime rate was highest in Allen County at 295.9 per 100,000 population (*Table 38*). LaGrange County had the fourth highest crime rate among Parkview counties.

Table 37: Public Safety   2009-2011

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Violent Crime Rate	2014-2016	295.9	33.0	159.3	103.5	158.0	50.7	45.5*

Social Environment

Social support and interaction are the most important factors in predicting one's physical health and well-being, regardless of age ("The importance of social interaction to human health |," n.d.). Today, people socialize more often with others through technology. Social media has become the preferred method of making, maintaining, and communicating with friendships and filling leisure time. Individuals use the Internet for various day-to-day activities like banking, paying bills, shopping, studying, and more.

LaGrange County has the lowest percentage of households with an Internet subscription and households with one or more types of computing devices, 54.8% and 63.9%, respectively (*Table 39*). The high Amish population in LaGrange County may contribute to this. Civic engagement defined by voting shows more than 50% turnout in all counties.

An aging population suffers from a higher risk of social isolation than a younger population as indicated by Americas Health Rankings. The percentage of individuals age 65 and older living alone ranges from 16.2% in LaGrange County to 30.4% in Allen County.

Table 38: Social Environment

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Households with an Internet Subscription	2013-2017	78.9%	73.7%	75.3%	54.8%	76.1%	70.9%	76.0%
Households with >= 1 Type of Computing Device	2013-2017	88.1%	85.4%	85.5%	63.9%	85.5%	85.4%	88.0%
People 65+ Living Alone	2013-2017	30.4%	26.1%	24.4%	16.2%	28.1%	27.6%	25.7%
Voter Turnout: Presidential Election	2016	55%	63%	61%	71%	56%	61%	71%

Transportation

Transportation is often cited as a barrier to healthcare access, especially in rural areas. The consequences of this hurdle include rescheduled or missed appointments, delayed care, and missed or delayed medication use ("Traveling Towards Disease: Transportation Barriers to Health Care Access," n.d.), which leads to inadequate management of chronic illness and deficient health outcomes. In Indiana, a nonexistent comprehensive public transportation system contributes to this dilemma *(Table 40)*. Individuals using public transport to commute to work is less than one percent in all counties. Households without a vehicle is highest in LaGrange County at 27.8%. The preference of the Amish population to use horses and wagons rather than motor vehicles is likely reflected in this observation.

Table 39: Transportation

| Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Households without a Vehicle	2013-2017	6.3%	4.8%	6.3%	27.8%	5.3%	4.5%	3.6%
Workers Commuting by Public Transportation	2013-2017	0.8%	0.3%	0.1%	0.2%	0.0%	0.7%	0.3%

COMMUNITY PERCEPTIONS

PROVIDER SURVEY RESULTS

Top Community Health Concerns (Provider Perceptions)

Providers perceive that the top three greatest community health needs are **substance abuse services** (77.3 %), **obesity** (63.6%), and **mental health** (59.1%) (*Figure 18*).

Figure 18: Community Health Issues of Greatest Concern (Provider Perceptions)
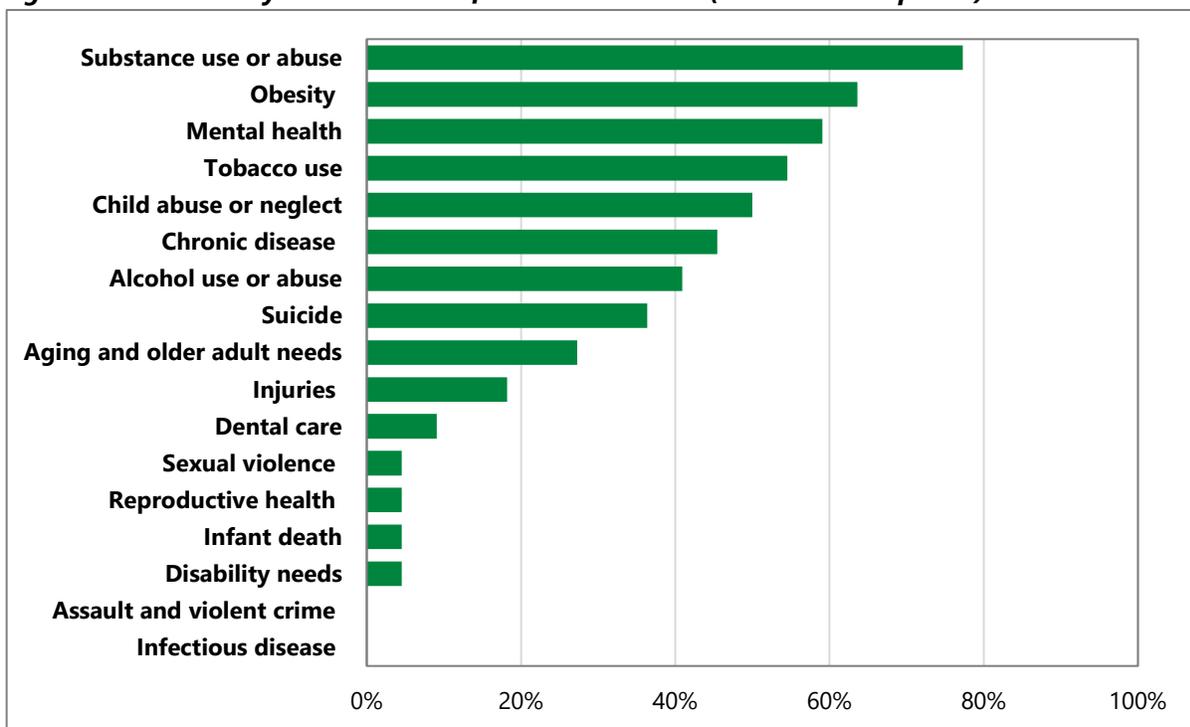
Most Important Service Needs (Provider Perceptions)

The three most important service needs identified by providers across the Parkview Health service area include **substance abuse services** (93.3%), **mental health counseling** (79.7%), and **quick access to primary care** (74.5%) (*Figure 19*).

Figure 19: Greatest Social Service Needs (Provider Perceptions)
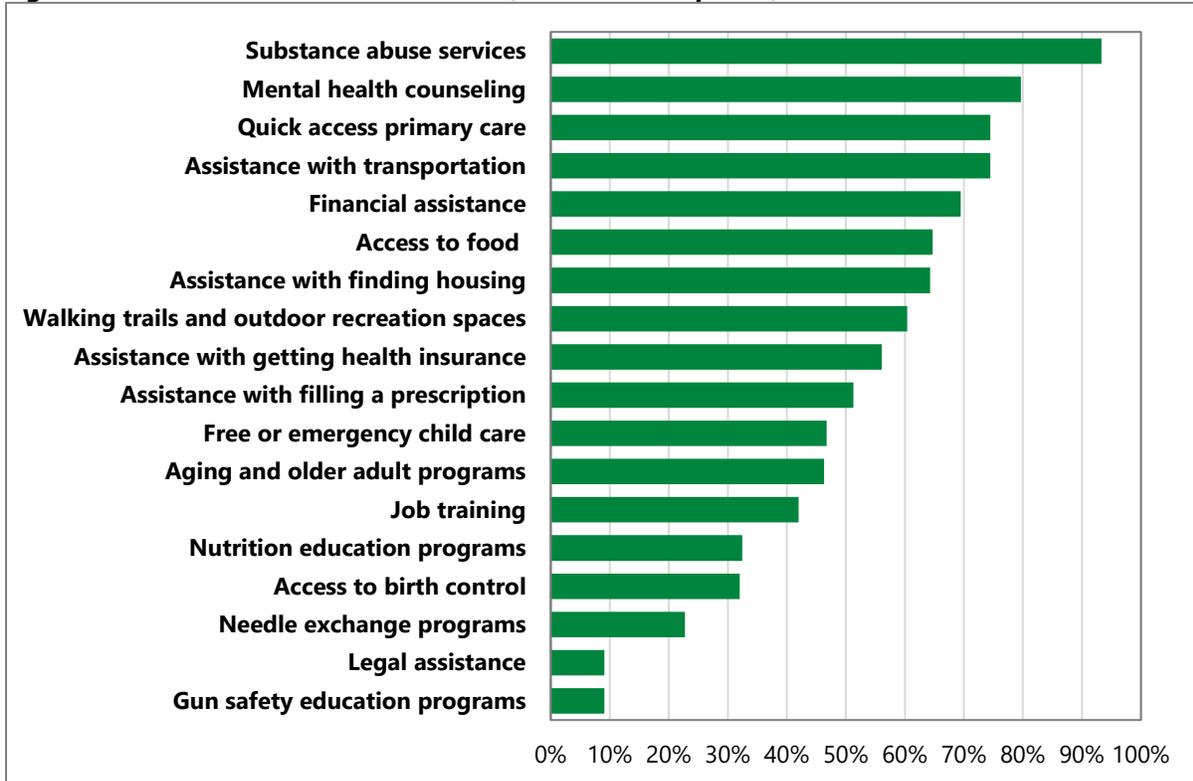
Top Barriers to Care/Service Access (Provider Perceptions)

Providers identified **cost** and **lack of insurance** as the top barrier faced by community members when accessing care/services (68.2%), followed by **access/insufficient healthcare resources** (54.5%), and **education/health literacy** (50%) as major concerns. (*Figure 20*)

Figure 20: Top Barriers to Patients Accessing Care/Services (Provider Perceptions)
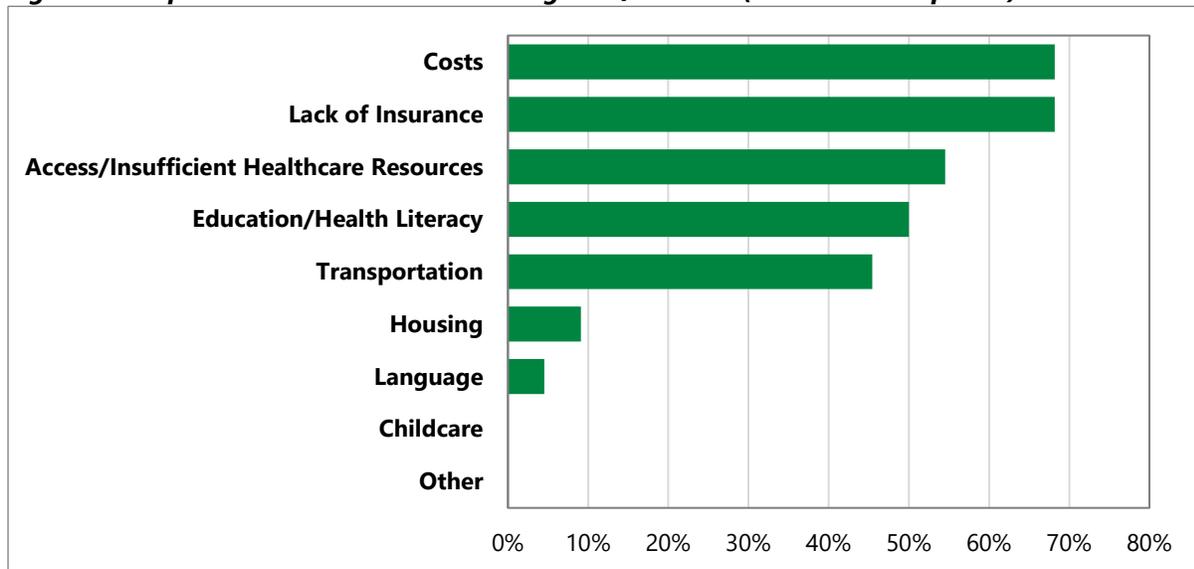
Top Barriers to Care/Service Delivery (Provider Perceptions)

Providers identify the top barriers in care/service delivery as **insufficient healthcare resources** (50%), **effective quality improvement strategies** (45.5%), and the **collaboration with other providers** (40.9%) (*Figure 21*).

Figure 21: Top Barriers to Providing Care/Services (Provider Perceptions)
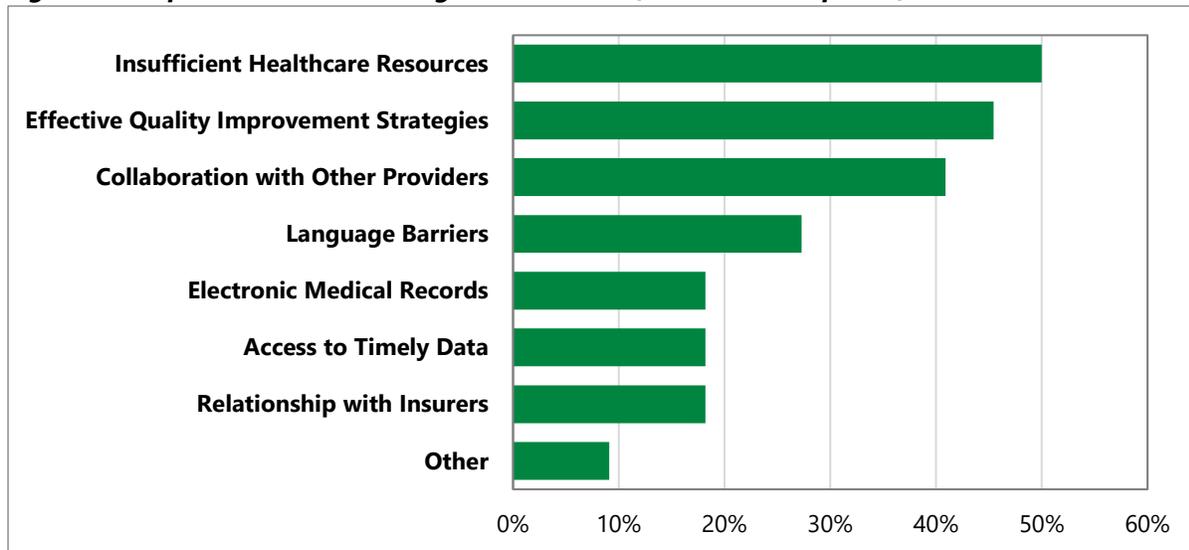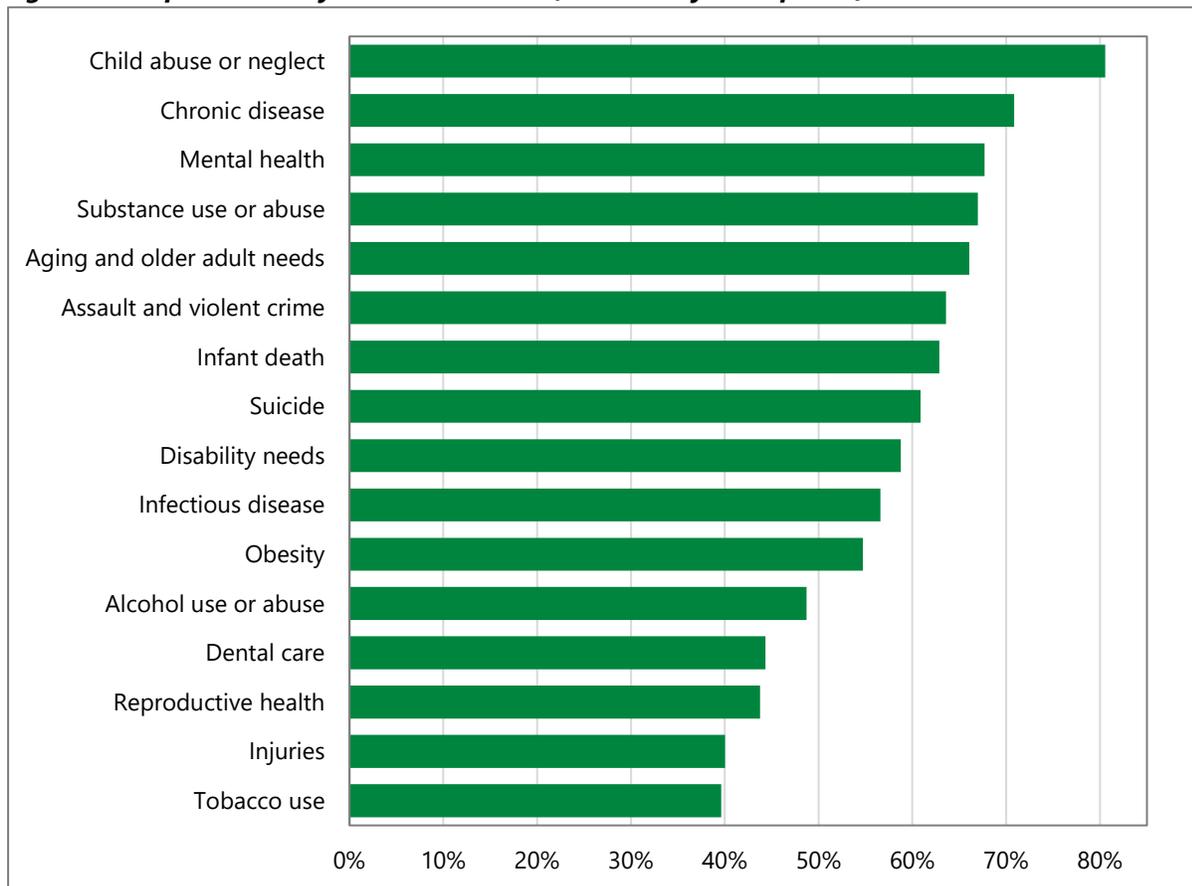
COMMUNITY SURVEY RESULTS

Community Health Concerns

Public survey respondents in the Parkview region ranked **child abuse or neglect** as their top (80.6%) health concern, followed by **chronic disease** (70.8%) and **mental health** (67.7%) (*Figure 22*).

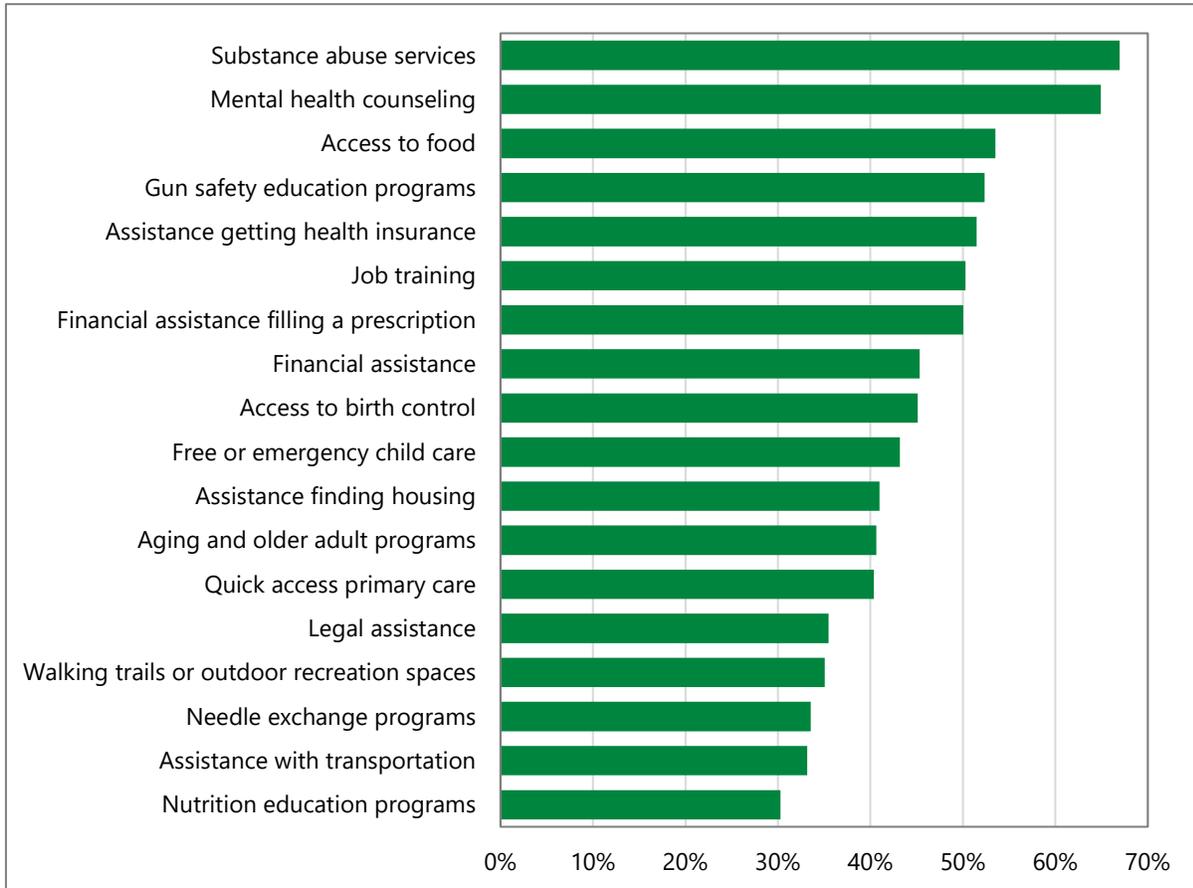**Figure 22: Top Community Health Concerns (Community Perceptions)**

Social Issues Important to the Community

Substance abuse services is most frequently indicated by community respondents as a top social service issue for their community (67.0%), followed by **mental health counseling** (64.9%) and **access to food** (53.5%) (*Figure 23*).

Figure 23: Top Social Service Needs (Community Perceptions)

AMISH COMMUNITY SURVEY RESULTS

The Amish community survey results indicate the top community health concerns are **chronic diseases** (67.8%), **alcohol use or abuse** (60%), **tobacco use** (57.4%**)**, **injuries** (55.7%), and **obesity** (53.9%). A detailed report comparing survey results from 2016 and 2019 serves as a companion piece to this CHNA report.

Figure 24: Top Health Concerns Identified by Amish Community
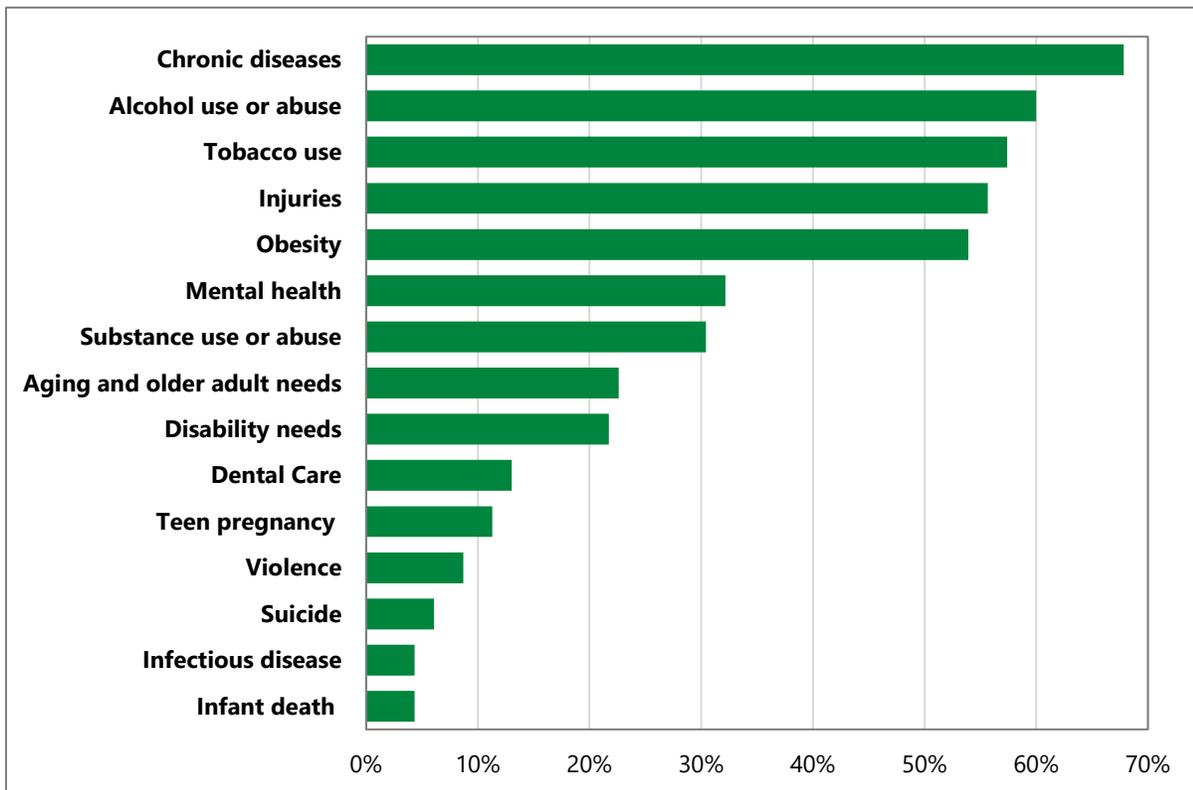
In the 2016 Parkview Health CHNA, the health issues perceived as "big problems" by the Amish community were **drug use** (72.4%), **overweight/obese** (65.5%), and **alcohol use** (60.3%). In 2019, **substance use** ("drug abuse" in 2016) ranked seventh among the top health issues, suggesting a decline in perceived importance. In 2019, the top three issues are **chronic diseases** (ranked first), **alcohol use/abuse** (ranked second), and **smoking** (ranked third).

RANKING COMMUNITY HEALTH NEEDS

PROCESS AND CRITERIA

A modified Hanlon Method prioritized health concerns for Parkview Health hospital communities. This method, also known as the Basic Priority Rating System (BPRS) 2.0, is recommended by the National Association of County and City Health Officials (NACCHO) for prioritizing community health needs (*Guide-to-Prioritization-Techniques.pdf*, n.d.). Although complex to implement, it is useful when the desired outcome is an objectively selected list. Explicit identification of factors must be considered to set priorities which enables a transparent and replicable process. As illustrated in Figure 257, priority scores (D) are calculated based on the size of the health problem (A), seriousness of the health problem (B), and the availability of effective health interventions (C).

Figure 25: Components of the Priority Score

Priority Score

Size of Health Problem — SECONDARY DATA — How many people are affected?

Seriousness of Health Problem — PRIMARY, SECONDARY & RESEARCH DATA — What are the public and individual impacts of the problem?
COMMUNITY CONCERN • TREND • IMMEDIATE IMPACT • LONG-TERM ILLNESS • COST

Effectiveness of Interventions — BEST PRACTICES RESEARCH — Are there recommended clinical and/or preventative interventions?

Priority Score = [Size + (2 x Seriousness)] x Effectiveness

SECONDARY DATA

Size of Health Problem

How many people are affected?

Population percentage estimates of each health problem are calculated and used to measure the **size** of a health problem following the recommendations of Neiger et al. (Neiger, Thackeray, & Fagen, 2011). The assigned size score of each health indicator is shown in column A of the scoring tables in Appendix B.

PRIMARY, SECONDARY & RESEARCH DATA

Seriousness of Health Problem

What are the public and individual impacts of the problem?

COMMUNITY CONCERN • TREND • IMMEDIATE IMPACT • LONG-TERM ILLNESS • COST

The **seriousness** of each health problem was determined based on five questions.

1. Is there an immediate potential impact on the larger community?
   — Is there a **communicable nature** of the health problem?
   — Are there **behavioral effects** related to the health problem **on others**?
   — Is there **emotional and physical impact** of the health problem **on others** with respect to caregiving?
2. Is there a measurable **public health concern**?
   (Measured using the Community and Provider Survey results)
3. Does the problem cause **long term illness**?
   (Years of life lived with a disability and years lost due to premature death)
4. Is there an **increasing prevalence** of the problem in the community?
   (Based on time trends of affected population)
5. Are there **high costs** associated with the problem?
   (Healthcare spending associated with the health problem)

Seriousness scores are shown in column B of the scoring tables in Appendix B.

Effectiveness of Interventions

Are there recommended clinical and/or preventative interventions?

The final criterion, **effectiveness of interventions**, was calculated using two resources for systematic reviews: *CDC's Community Guide* and *HealthEvidence.org*. The *Community Guide* recommended by NACCHO was used as the main source ("Health Evidence," n.d.; "The Guide to Community Preventive Services (The Community Guide)," n.d.). The *Community Guide* conducts systematic reviews of interventions in many topic areas to learn what works to promote public health. The Community Preventive Services Task Force uses the results of these reviews to issue evidence-based recommendations and findings to the public health community. Only the Task Force's recommended interventions were considered in this report.

For health problems not found in the *Community Guide, Healthevidence.org* was used. *Healthevidence.org* is a registry of systematic reviews maintained by McMaster University in Canada to promote evidence-based public health. Interventions evaluated in high-quality studies and recommended by reviewers were used in this report.

Scores were assigned based on whether a policy or preventive and/or therapeutic intervention was recommended by either of these sources, as outlined below.

— At least one recommended policy, preventive, or therapeutic intervention = 1 point
— No recommended interventions = 0 points

For each health indicator, the effectiveness score, basic priority score, and resulting rank are shown in columns C, D, and E, respectively, of the table in **Appendix B**.

RANKING OF COMMUNITY HEALTH ISSUES

The 2019 top-ranking indicators for the Parkview Health region are shown in *Table 41* with the top ranking indicators shown in green. For LaGrange County, three of the top four health concerns–**cardiovascular disease, diabetes, and obesity**–are etiologically and clinically related health issues. These rankings are indicative of interrelated and interconnected health conditions, providing a broader picture of the health issue experienced by the community and rendering credence to the methodology adopted for this purpose. Another top ranking indicator was **aging**. Unlike other counties in the Parkview Health region, drug use and addiction was not a top concern for LaGrange, although **excessive alcohol use** was close to the top five for LaGrange. Comparing the rankings for 2019 community health needs assessment for Parkview Region with 2016 community health needs assessments, we see that among the top five health needs, only aging has moved to the top five (from Rank 12 to 3). Changes in the methodology for calculating "size of the health issue" and "effectiveness of intervention" may have contributed to this change.

Table 40: Top Ranking Indicators

Health Need / Concern	Health Indicator	2019 Rank								2016 Rank
		Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Avg Rank	
1. **Cardiovascular Disease**	Stroke Hospitalizations	1	2	1	1	1	1	1	1.1	6
	Heart Disease Hospitalizations	1	1	1	1	1	1	3	1.3	
2. **Diabetes**	Adults 20+ with Diabetes	1	2	1	1	1	1	3	1.4	3
3. **Aging**	Alzheimer's Disease	5	4	4	1	4	4	3	3.6	12
4. **Obesity**	Adults 20+ who are Obese	5	6	6	1	4	4	3	4.1	2
5. **Drug & Alcohol Use and Addiction**	Non-Fatal ED Visits due to Opioid Overdoses	1	4	4	12	10	4	11	6.6	5
6. Mental Health	Percent of Population with Frequent Mental Distress	7	7	7	10	6	7	7	7.3	10
Drug & Alcohol Use and Addiction	Adults who Drink Excessively	8	7	8	6	6	10	9	7.7	5
7. Tobacco Use	Adults who Smoke	8	7	12	8	8	8	7	8.3	1
8. Maternal Child Health	Child Abuse and Neglect	10	10	17	6	8	8	1	8.6	4

SELECTING 2020-2022 PRIORITIES

PRIORITY SELECTION PROCESS

As part of its priority selection process, Parkview Health considered the availability of evidence-based interventions designed to address its top ranking health issues. The "PEARL" (Propriety, Economics, Acceptability, Resources, and Legality) test eliminates impractical or impracticable interventions (Vilnius & Dandoy, 1990).

The Indiana Partnership for Healthy Communities presented an overview of the Regional Community Health Needs Assessment (CHNA) findings on July 16, 2019 to a group of attendees representing the Parkview Health System. In total, over 60 individuals participated in the prioritization process, including representatives from hospital service lines, community hospitals, healthcare providers/physicians, executive leadership team, community health, and the board of directors. After a thorough review of the data and considerable discussion, the group used an electronic voting system to rank the various health needs identified in the CHNA. Ultimately, the group voted on Substance Use Disorder/Mental Health as the shared health priority across the Parkview System.

As a continuation of the prioritization process, Parkview LaGrange Hospital's Community Health Improvement Committee (CHIC), which is comprised of a multi-disciplinary advisory council, reviewed the data to select additional health priorities for the hospital. This group of stakeholders met on August 27, 2019 and discussed the results of the Parkview Health CHNA. After a thoughtful review of the data and extensive discussion, the advisory committee chose two additional priorities, which were obesity, and maternal/infant/child health with an emphasis on child health. It was also determined that childcare would be a social determinant of this. The top three health priorities were presented to and adopted by the Parkview LaGrange Hospital Board September 27, 2019.

SELECTED PRIORITIES

Parkview health LaGrange selected the following as their top priorities for 2020-2022.

1. Substance use/Mental health
2. Obesity
3. Maternal and Child health

RESOURCES

Resources in the Parkview LaGrange service area for addressing community health are mentioned in Appendix C.

DATA LIMITATIONS

Secondary Data: One of the most notable limitations of the secondary data is that different data sources applied different models to estimate community health indicators. Some indicators were based on administrative data while others were based on sample surveys. In addition, secondary data was sourced from different data years, based on data availability. The available data ranged from a 2010-2014 five-year average to 2018.

Another notable limitation is that when morbidity rates were not available, hospitalization rates and mortality rates were used. Hospitalization rates are available from state hospital associations and are often used as surrogate measures of community health need. Hospitalization rates typically are based on patient home address versus treatment location, which is appropriate when attempting to use these rates to measure community health. However, a limitation is that hospitalization rates and mortality rates may underreport the rate of a health condition because hospitalization rates only capture data from individuals who seek hospital care and do not capture data from individuals who have the health condition but do not receive associated hospital care. Another limitation is that populations with closer proximity to a hospital facility may be more likely to seek treatment for health conditions implying that a hospital facility has populations with higher rates of health conditions.

Provider Survey: The principal limitation of the provider survey is that it was not conducted using a random sampling technique and may reflect response bias. This means that the responses were not necessarily representative of the full population of Parkview providers. Another limitation is that respondents were asked to select from pre-defined lists of disadvantaged populations and potential concerns. While the list of possible concerns was developed based on expert knowledge, it is possible that there are other concerns that were not listed.

Community Survey: A general limitation of broad community surveys is that participation tends to be greater among retirees or those otherwise unemployed compared to younger, employed persons. To address this concern, statistical weighting is used by the Survey Research Laboratory of the School of Public Health at the University of Alabama at Birmingham. Also, although the size of the random population sample allowed for conclusions to be made for the Parkview Health System primary service area as a whole, a sufficient sample was not obtained in each county to allow for county specific statistics to be generated. This made the information obtained from the Provider Survey even more important.

THREE-YEAR IMPACT REPORT

Overview

The findings of the 2016 Community Health Needs Assessment identified three areas that would be a focus over the next three years for LaGrange County.

1. Obesity
2. Mental Health
   a. Drug/Alcohol Use

The strategic goals of the obesity initiatives supported by Parkview LaGrange Hospital

are to:

1. Reduce body mass index (BMI) and improve A1C levels
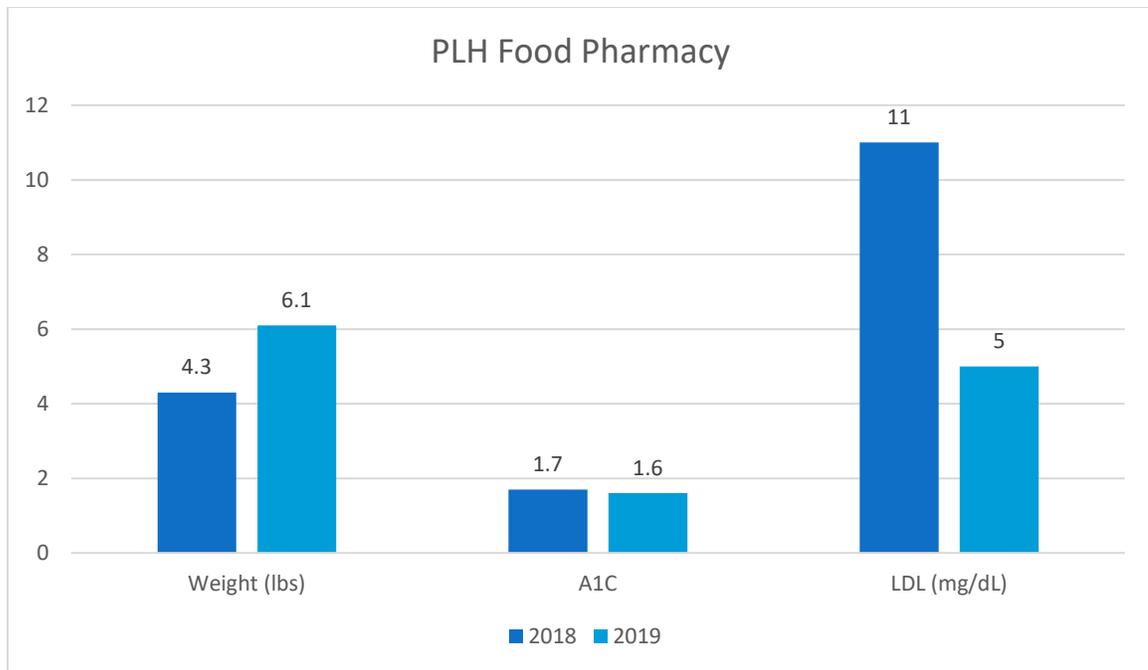2. Increase consumption of healthy foods and physical activity

The strategic goals of the mental health initiatives are to:

1. Equip students with coping skills to address emotional, behavioral, and physical struggles
2. Reduce the number of suicide completions

Five programs were identified to address goals and objectives in the implementation plan, and Parkview LaGrange contributed $150,000 to these services. These programs served a total of 972 persons in the LaGrange County community.

Sample Highlights of Obesity Initiatives

Parkview LaGrange implemented a Food Pharmacy program in 2018 with the goals of reducing participant BMI and A1C levels. A total of 19 community members have participated in this program over the last two years. As a part of this program, enrolled community members participate in activities such as cooking classes and a grocery store tour to encourage healthy eating on a budget. They also have the opportunity to meet regularly with a pharmacist, dietitian, and health coach. To date, the 19 program participants have lost an average of 5.2 pounds and reduced their A1C by an average 1.6 points (see graph below). In total, the hospital has provided $2,919 in funding and 575 staff hours to this program.

PLH Food Pharmacy

Bar chart showing values for 2018 and 2019:
- Weight (lbs): 2018 = 4.3, 2019 = 6.1
- A1C: 2018 = 1.7, 2019 = 1.6
- LDL (mg/dL): 2018 = 11, 2019 = 5

Parkview LaGrange also supports Planting Healthy Seeds, a school-based obesity prevention program offered to third and fourth grade students in LaGrange County. This program has been in LaGrange County since 2015. Since implementation, through the 2018-2019 school year, 246 students have participated in this program. The goal of Planting Healthy Seeds is to change a child's behaviors, as evidenced by an increase in their activity levels as well as the amount of healthy food they consume. This is measured by pre- and post-tests that are completed by students. On average, behavior change (including physical activity and nutrition choices) increased by 2.38% each school year, and nutrition knowledge increased by 2.88% each school year.

Parkview LaGrange Hospital also began a partnership with the Cole Center YMCA to provide exercise and fitness classes in LaGrange County. The goal of this program is to improve access to physical activity and well-being opportunities for the area. This program primarily serves seniors, retired community, and working adults. The total number of participants has increased from 400 in 2016 to 1400 to-date in 2019. The group exercise classes offered in LaGrange County help participants to become physically stronger and lead a more active lifestyle. Regular attendees have also benefited from the social network the classes have created, with several participants reporting connections that have continued outside of the fitness classes.

Sample Highlights of Mental Health Initiatives

In 2016, Parkview LaGrange paid for eight staff members to become certified as Question, Persuade, Refer (QPR) instructors. Upon completion of this certification, QPR instructors train community members on effective suicide prevention/intervention strategies. The overall goal of this initiative is to reduce suicide completions in LaGrange County. Over the past three years, there have been approximately 746 community members trained in suicide prevention techniques. In total, Parkview LaGrange provided $680 in funding and 1,492 training hours.

In 2017, LaGrange County schools implemented a program to integrate mental/behavioral health care into their schools. Parkview LaGrange Hospital is partnering with three local school systems to fund an onsite mental health counselor for four hours per week. The goal of this program is to address mental health, behavioral health, behavior problems, grief, and substance use and promote overall mental and physical health in the students they serve. Over the past two years, 192 students have received help through this initiative. The total amount of funding that has been provided is $10,800.

Additionally, a Suicide Support Group was started in 2017. The goal of this group to promote the recovery of survivors who have lost a loved one by suicide and to create a support network for these individuals. An average of 5 participants regularly attend these group meetings.

Parkview LaGrange Hospital implemented a LifeBridge program in 2014, which serves qualifying adults and assists them with medication reconciliation, treatment planning, and socialization. Counseling for substance use disorder is available if needed on a case-by-case basis. The goal of this program is to provide intensive individual, family and/or group services to adults that otherwise wouldn't be able to access this type of programming in the community. Over 10,500 hours of direct counseling services have been provided through LifeBridge.

Conclusion

Based on the results of the current implementation plan, Parkview LaGrange Hospital will continue its efforts with community partners to make an impact in the areas identified above. Added focus will be placed on identifying meaningful metrics and tracking the impact these measures are having on our top three community health priorities.

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APPENDIX A: PROVIDER SURVEY

Table 41: Most Urgent Community Needs Identified in Provider Survey

Community Need	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Region
	% of Providers Responding that Need was Amongst the Most Urgent							
Substance abuse services	79.5%	64.0%	66.7%	93.3%	81.3%	95.7%	87.5%	83.2%
Mental health counseling	80.8%	54.4%	66.7%	79.7%	75.7%	73.9%	68.8%	75.7%
Assistance with transportation	61.6%	54.4%	50.0%	74.5%	71.1%	73.9%	75.0%	62.4%
Financial assistance	61.6%	64.0%	50.0%	69.5%	58.8%	69.6%	81.3%	61.9%
Assistance with getting health insurance	71.2%	60.8%	33.3%	56.1%	64.3%	60.9%	68.8%	57.9%
Access to food	52.1%	73.6%	33.3%	64.7%	60.2%	65.2%	50.0%	55.4%
Aging and older adult programs	60.3%	76.8%	50.0%	46.3%	74.9%	52.2%	50.0%	54.0%
Job training	52.1%	67.2%	16.7%	42.0%	48.0%	52.2%	75.0%	52.5%
Free or emergency child care	45.2%	57.6%	50.0%	46.8%	43.3%	43.5%	56.3%	48.0%
Assistance with finding housing	47.9%	48.0%	66.7%	64.3%	43.6%	60.9%	31.3%	46.0%
Quick access primary care	42.5%	54.4%	33.3%	74.5%	80.1%	21.7%	37.5%	45.0%
Walking trails, outdoor recreation spaces	43.8%	51.2%	33.3%	60.4%	60.2%	30.4%	37.5%	43.1%
Nutrition education programs	49.3%	60.8%	50.0%	32.5%	49.7%	39.1%	31.3%	40.6%
Assistance with filling a prescription	50.7%	44.8%	33.3%	51.3%	32.5%	39.1%	43.8%	40.1%
Access to birth control	43.8%	41.6%	0.0%	32.0%	37.7%	21.7%	56.3%	34.7%
Needle exchange programs	31.5%	41.6%	0.0%	22.7%	21.1%	26.1%	25.0%	27.7%
Gun safety education programs	39.7%	28.8%	16.7%	9.1%	21.6%	30.4%	31.3%	26.2%
Legal assistance	31.5%	28.8%	16.7%	9.1%	32.2%	30.4%	0.0%	22.8%

APPENDIX B: SCORING OF COMMUNITY HEALTH NEEDS

Table 42: Priority Scores and Ranking

HCI Health Indicator (Those in lowest performing quartile of Indiana counties for at least one county served by a Parkview Health hospital)	LAGRANGE										
	Size of Health Problem (A)^		Seriousness of Health Problem (B)‡						Effectiveness of Interventions (C)^^	Priority Score (D)^^^	Rank
	Size of Health Problem (%)	Score	Q1	Q2	Q3	Q4	Q5	Score	Score		
Alzheimer's Disease or Dementia	1.64	5	2	2	1	1	1	7	1	19	1
Heart Disease Hospitalizations	0.77	4	0	2.5	2	1	2	7.5	1	19	1
Stroke Hospitalizations	0.22	3	0.5	2.5	2	1	2	8	1	19	1
Adults 20+ with Diabetes	10.70	7	0.5	2.5	0.5	1	1.5	6	1	19	1
Adults 20+ who are Obese	36.80	9	0	2.5	0.5	1	1	5	1	19	1
Adults who Drink Excessively	18.20	8	2	1.5	0.5	1	0	5	1	18	6
Child Abuse and Neglect Rate	1.02	5	2	3.5	0	1	0	6.5	1	18	6
Mothers who did not Receive Early Prenatal Care	56.20	10	1.5	1	0	1	0	3.5	1	17	8
Adults who Smoke	20.70	8	1	1.5	0	0.5	1.5	4.5	1	17	8
Percent of Population with Frequent Mental Distress	12.40	7	0.5	1.5	1	0.5	1	4.5	1	16	10
Breast Cancer Incidence Rate	0.11	3	0	2.5	2	1	0.5	6	1	15	11
Osteoporosis: Medicare Population (Prorated)	0.64	4	0.5	2	1	0.5	1	5	1	14	12
Adult Asthma Prevalence	10.00	7	0.5	2.5	0	0.5	0	3.5	1	14	12
Non-Fatal Emergency Department Visits due to Opioid Overdoses	0.01	1	2	3.5	0.5	0.5	0	6.5	1	14	12
Prostate Cancer Incidence Rate	0.08	2	0	2.5	2	0.5	0.5	5.5	1	13	15
Oral Cavity and Pharynx Cancer Incidence Rate	0.01	1	0	2.5	2	0	0.5	5	1	11	16
Chlamydia Incidence Rate	0.12	3	2	1	0	1	0	4	1	11	16
Injury Emergency Department Visits Per 10k	6.41	6	0	0.25	0.5	0.5	1	2.25	1	10.5	18
Salmonella Infection Incidence Rate	0.02	1	2	1	1	0	0.5	4.5	1	10	19
Age-Adjusted Death Rate due to Chronic Lower Respiratory Diseases	0.05	2	0	2.5	0	1	0	3.5	1	9	20
Gonorrhea Incidence Rate	0.01	1	2	1	0	1	0	4	1	9	20
Chronic Kidney Disease: Medicare Population (Prorated)	2.77	5	0	2.5	0	1	0	3.5	0	0	22

Hepatitis C Prevalence	0.00	0	2	1	0	0	0.5	3.5	1	0	**22**
Age-Adjusted Death Rate due to Influenza and Pneumonia	0.00	0	1	1	0	0	0.5	2.5	1	0	**22**

^ Size (A) [10]

Score	% of Population
10	> = 50%
9	25 to < 50%
8	17.5 to < 25%
7	10 to < 17.5%
6	5 to < 10%
5	1 to < 5%
4	0.50 to < 1%
3	0.10 to < 0.50%
2	0.05 to < 0.10%
1	0.01 − < 0.05%
0	0 − < 0.01% (1/100 of 1%)

‡ Seriousness (B)
Includes Q1 − Q5, as follows:

Q1 Impact on Others
Three aspects of the health issue:
1. Communicable? 1 if Yes, 0 if No.
2. Behavioral effects on others? 1 if Yes, 0 if No.
3. Caregiving required? 1 if Constant, 0.5 if Periodic, 0 if None.
Impact value equals the sum of the above.

Q2 Level of Community Concern
Based on % of community survey respondents that indicated issue was a priority need. Possible values: 0, 0.5, 1, 1.5, 2. These were then combined with provider survey results with same possible values yielding total values from 0-4
A value of 4 represents the highest level of concern and 0 the lowest.

Q3 Severity (Disability)
Based on time lived with disability and time lost due to premature death [1]
Possible values: 0, 0.5, 1, 1.5, 2.
A value of 2 represents highest level of disability and 0 the lowest.

Q4 Urgency
Based on rate of increasing trend as measured as a rolling rate of change for all years available in the time series.
Possible values: 0, 0.5, 1, 1.5, 2.
A value of 2 represents highest rate of increase and 0 the lowest.

Q5 Economic Costs
Based on estimated % of total U.S. healthcare costs [2-17]
Possible values: 0, 0.5, 1, 1.5, 2.
A value of 2 represents highest cost and 0 the lowest.

Score
Q1 + Q2 + Q3 + Q4 + Q5

^^Effectiveness of Intervention (C)
Based on existence of at least one evidence-based intervention, as per evidence presented in the CDC Community Guide or HealthEvidence.org (2019).

Evidence-based Interventions	Score
Yes	1
No	0

^^^Priority Score (D)
= [A + (2 x B)] x C

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APPENDIX C: RESOURCES

Name	City	ZIP Code	Service
MATERNAL, INFANT, AND CHILD HEALTH			
Parkview LaGrange Lactation Services	LaGrange	46761	Breastfeeding Support Group
Parkview Noble Hospital	Kendallville	46755	Breastfeeding Support Group
Life & Family Services	Kendallville	46755	Campaign For Our Kids
LaGrange County Health Department	Topeka	46571	Childhood Immunization
LaGrange County Health Department	Shipshewana	46565	Childhood Immunization
LaGrange County Health Department	LaGrange	46761	Childhood Immunization
LaGrange County Division of Family Resources	LaGrange	46761	Family Planning Eligibility Program
Life & Family Services	Kendallville	46755	Pregnancy and Parenting Resource Center
LaGrange County WIC	LaGrange	46761	WIC Care
ABUSE/ADDICTION			
Addiction Recovery Centers of Indiana - LaGrange	LaGrange	46761	Substance Use Disorder Services
MENTAL HEALTH			
Northeastern Center - LaGrange County Clinic	LaGrange	46761	Outpatient Mental Health Services
Bowen Center - LaGrange	LaGrange	46761	Outpatient Treatment Services
AGING			
LaGrange County Council on Aging	LaGrange	46761	Senior Center
HEALTHCARE ACCESS			
Brightpoint	LaGrange	46761	Covering Kids and Families
Parkview LaGrange Hospital	LaGrange	46761	Health Insurance
LaGrange County Division of Family Resources	LaGrange	46761	Medicaid/Hoosier Healthwise/Hoosier Care Connect
STD TREATMENT			
LaGrange County Health Department	Shipshewana	46565	Adult Immunizations
LaGrange County Health Department	Topeka	46571	Adult Immunizations